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Selected Data on Graduate Students and Postdoctorates in Science and Engineering: Fall 1991

#172

Science and Engineering Education Program
Division of Science Resources Studies
National Science Foundation

NSF 92-335

nlb

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Selected Data on Graduate Students and Postdoctorates in Science and Engineering: Fall 1991

1992

Project Monitor:
J. G. Huckenpöhler

Science and Engineering Education Program
Division of Science Resources Studies
National Science Foundation

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GENERAL NOTES

Data presented in these tables are derived from the National Science Foundation/National Institutes of Health Survey of Graduate Science and Engineering Students and Postdoctorates, Fall 1991. Unless otherwise specified, the published data represent estimates of total enrollment in science and engineering (S&E) programs in approximately 10,800 graduate departments at some 730 institutions in the United States and outlying areas.

All eligible institutions were included in the survey population in the years 1988 through 1991. From 1984 through 1987, the surveys were conducted on a stratified random sample basis, with all doctorate-granting institutions and all master's-granting Historically Black Colleges and Universities included in the certainty stratum. Data for the remaining master's-granting institutions were divided into two sample strata based on size of enrollment. Data for sampled institutions were re-estimated in 1988 on the basis of 1983 and 1988 data. During the 1989 survey cycle, S&E field definitions were reviewed and some subfields were deleted. Data for 1975 through 1988 were adjusted to conform to the revised definitions.

In addition, institutions may revise their data for earlier years. For these reasons, only the latest trend data should be used in historical analyses.

Complete technical notes will appear in the full *Detailed Statistical Tables* publication, to be released later this year. For further information on data availability, please contact the Project Monitor:

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DATA TAPES

For those wishing to access graduate student data at the individual department level, the data processing contractor, Quantum Research Corporation, has made available single- and multiyear data tapes at a cost of $100 for the first year's data and $35 for each additional year. A description of the data available on these tapes may be found in the *Guide to the National Science Foundation's Surveys of Academic Science and Engineering;* information on the formats of the tapes, and the order blanks, are available in the *Supplemental Guide to Data Tapes from the National Science Foundation's Surveys of Academic Science and Engineering*. Both of these publications may be obtained by calling NSF's Division of Science Resources Studies at (202) 634-4673.

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Institutional planners are now able to acquire data from several academic S&E resources on CD-ROM compact disk.

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CASPAR data are drawn from a number of sources. All are available for individual institutions, by State, and at the national level. Longitudinal data from surveys of universities and colleges conducted by the NSF Division of Science Resources Studies include the Survey of Academic R&D Expenditures, the Survey of Federal Support to Universities and Nonprofit Institutions, and the Survey of Graduate Students and Postdoctorates in Science and Engineering. Data from surveys of universities and colleges conducted by the National Center for Education Statistics include Earned Degrees, Opening Fall Enrollment, Faculty Salaries, Tenure and Fringe Benefits, and Financial Statistics. Data from other sources include the National Research Council Doctorate Program Ratings.

For additional information on CASPAR write to the following address:

Quantum Research Corporation
7300 Pearl Street, Suite 210
Bethesda, Md. 20814

Telephone (301) 657-3070.

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Table 1. Science and engineering graduate students by field and enrollment status in all institutions according to highest degree granted: 1991

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Field	In all institutions			Doctorate-granting			Master's-granting		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total, all surveyed fields	475,691	308,669	167,022	411,296	286,756	124,540	64,395	21,913	42,482
Total, science/engineering fields	415,240	277,898	137,342	360,723	259,484	101,239	54,517	18,414	36,103
Engineering, total	114,407	71,230	43,177	105,092	68,925	36,167	9,315	2,305	7,010
Aerospace	4,041	3,314	727	3,974	3,247	727	67	67	0
Agricultural	983	825	158	983	825	158	0	0	0
Biomedical	2,233	1,921	312	2,185	1,896	289	48	25	23
Chemical	7,127	5,788	1,339	7,000	5,733	1,267	127	55	72
Civil	17,265	11,214	6,051	15,985	10,836	5,149	1,280	378	902
Electrical	35,272	19,988	15,284	31,780	19,181	12,599	3,492	807	2,685
Engineering science	2,154	1,364	790	2,124	1,357	767	30	7	23
Industrial	13,333	5,705	7,628	11,773	5,422	6,351	1,560	283	1,277
Mechanical	17,820	11,654	6,166	16,620	11,371	5,249	1,200	283	917
Metallurgical/materials	5,149	4,059	1,090	4,995	4,034	961	154	25	129
Mining	489	336	153	475	325	150	14	11	3
Nuclear	1,282	1,080	202	1,282	1,080	202	0	0	0
Petroleum	711	521	190	700	514	186	11	7	4
Engineering, n.e.c.	6,548	3,461	3,087	5,216	3,104	2,112	1,332	357	975
Sciences, total	300,833	206,668	94,165	255,631	190,559	65,072	45,202	16,109	29,093
Physical sciences	34,900	30,131	4,769	32,938	29,364	3,574	1,962	767	1,195
Astronomy	829	810	19	829	810	19	0	0	0
Chemistry	19,422	16,696	2,726	18,317	16,289	2,028	1,105	407	698
Physics	14,221	12,482	1,739	13,576	12,158	1,418	645	324	321
Physical sciences, n.e.c.	428	143	285	216	107	109	212	36	176
Earth, atmospheric, and ocean sciences	14,747	10,414	4,333	13,224	9,880	3,344	1,523	534	989
Atmospheric sciences	968	859	109	956	857	99	12	2	10
Geosciences	7,628	5,691	1,937	7,068	5,472	1,596	560	219	341
Oceanography	2,293	1,898	395	2,173	1,834	339	120	64	56
Earth, atmos., and ocean sci., n.e.c.	3,858	1,966	1,892	3,027	1,717	1,310	831	249	582
Mathematical sciences	19,992	14,259	5,733	17,526	13,525	4,001	2,466	734	1,732
Computer sciences	34,728	16,552	18,176	27,693	14,583	13,110	7,035	1,969	5,066
Agricultural sciences	11,475	9,238	2,237	10,747	8,793	1,954	728	445	283
Biological sciences	52,120	42,929	9,191	48,093	41,282	6,811	4,027	1,647	2,380
Anatomy	1,046	956	90	1,046	956	90	0	0	0
Biochemistry	5,216	4,967	249	5,175	4,953	222	41	14	27
Biology	13,486	9,594	3,892	10,437	8,293	2,144	3,049	1,301	1,748
Biometry/epidemiology	2,066	1,446	620	2,066	1,446	620	0	0	0
Biophysics	663	645	18	663	645	18	0	0	0
Botany	2,661	2,276	385	2,611	2,229	382	50	47	3
Cell biology	2,804	2,711	93	2,804	2,711	93	0	0	0
Ecology	1,226	936	290	1,125	925	200	101	11	90
Entomology/parasitology	1,171	1,014	157	1,171	1,014	157	0	0	0
Genetics	1,524	1,416	108	1,482	1,375	107	42	41	1
Microbiology	4,937	4,409	528	4,879	4,400	479	58	9	49
Nutrition	4,251	2,959	1,292	3,919	2,857	1,062	332	102	230
Pathology	1,517	1,166	351	1,446	1,138	308	71	28	43
Pharmacology	2,436	2,308	128	2,436	2,308	128	0	0	0
Physiology	2,329	2,160	169	2,329	2,160	169	0	0	0
Zoology	2,192	1,784	408	2,173	1,765	408	19	19	0
Biosciences, n.e.c.	2,595	2,182	413	2,331	2,107	224	264	75	189
Psychology	51,592	32,382	19,210	36,358	26,052	10,306	15,234	6,330	8,904
Social sciences	81,279	50,763	30,516	69,052	47,080	21,972	12,227	3,683	8,544
Agricultural economics	2,366	2,003	363	2,313	1,968	345	53	35	18
Anthropology	6,695	5,036	1,659	6,410	4,928	1,482	285	108	177
Economics (except agricultural)	12,709	9,730	2,979	11,906	9,414	2,492	803	316	487
Geography	3,785	2,574	1,211	3,123	2,332	791	662	242	420
History and philosophy of science	383	340	43	383	340	43	0	0	0
Linguistics	3,452	2,597	855	3,102	2,546	556	350	51	299
Political science	31,929	16,126	15,803	25,073	14,250	10,823	6,856	1,876	4,980
Sociology	8,314	5,846	2,468	7,223	5,447	1,776	1,091	399	692
Sociology/anthropology	1,028	687	341	953	646	307	75	41	34
Social sciences, n.e.c.	10,618	5,824	4,794	8,566	5,209	3,357	2,052	615	1,437
Total, health fields	60,451	30,771	29,680	50,573	27,272	23,301	9,878	3,499	6,379
Dentistry	1,030	889	141	1,030	889	141	0	0	0
Neurology	1,006	978	28	981	968	13	25	10	15
Nursing	22,289	6,492	15,797	18,640	5,588	13,052	3,649	904	2,745
Pharmaceutical sciences	3,152	2,272	880	3,151	2,272	879	1	0	1
Preventive medicine/community health	8,595	4,500	4,095	8,321	4,446	3,875	274	54	220
Speech pathology/audiology	9,319	6,646	2,673	6,889	5,124	1,765	2,430	1,522	908
Veterinary sciences	894	717	177	875	706	169	19	11	8
Clinical medicine, n.e.c.	2,064	1,612	452	1,892	1,563	329	172	49	123
Health related, n.e.c.	12,102	6,665	5,437	8,794	5,716	3,078	3,308	949	2,359

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 2. Science and engineering graduate students in all institutions, by field and citizenship, and by racial/ethnic background of U.S. citizens: 1991

Field	Total	Racial/ethnic background of U.S. citizens						Non-U.S. citizens
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	475,691	16,542	1,448	20,201	13,407	291,631	19,392	113,070
Total, science & engineering fields	415,240	13,696	1,201	18,217	11,168	245,172	17,378	108,408
Engineering, total	114,407	2,034	189	7,203	2,179	55,020	6,463	41,319
Aerospace	4,041	44	5	196	54	2,134	386	1,222
Agricultural	983	4	1	28	13	408	12	517
Biomedical	2,233	38	3	138	40	1,224	56	734
Chemical	7,127	119	22	426	159	3,150	100	3,151
Civil	17,265	277	34	830	382	8,617	635	6,490
Electrical	35,272	668	40	3,104	663	15,633	2,428	12,736
Engineering science	2,154	34	4	115	26	1,240	28	707
Industrial	13,333	396	40	592	261	7,208	969	3,867
Mechanical	17,820	246	21	942	371	8,431	1,133	6,676
Metallurgical/materials	5,149	55	1	260	56	2,505	118	2,154
Mining	489	1	0	4	7	200	13	264
Nuclear	1,282	16	2	30	25	671	18	520
Petroleum	711	2	4	12	10	237	3	443
Engineering, n.e.c.	6,548	134	12	526	112	3,362	564	1,838
Sciences, total	300,833	11,662	1,012	11,014	8,989	190,152	10,915	67,089
Physical sciences	34,900	698	62	1,398	657	18,543	768	12,774
Astronomy	829	11	2	30	11	544	14	217
Chemistry	19,422	477	43	798	395	10,448	382	6,879
Physics	14,221	189	15	549	242	7,257	351	5,618
Physical sciences, n.e.c.	428	21	2	21	9	294	21	60
Earth, atmospheric, and ocean sciences	14,747	147	29	263	249	10,784	374	2,901
Atmospheric sciences	968	6	0	28	24	589	11	310
Geosciences	7,628	60	20	137	115	5,571	198	1,527
Oceanography	2,293	24	3	32	58	1,487	105	584
Earth, atmos., and ocean sci., n.e.c.	3,858	57	6	66	52	3,137	60	480
Mathematical sciences	19,992	518	20	865	349	10,483	1,132	6,625
Computer sciences	34,728	1,087	42	2,839	629	16,636	2,099	11,396
Agricultural sciences	11,475	147	32	219	279	7,426	155	3,217
Biological sciences	52,120	1,319	206	2,425	1,391	33,236	1,093	12,450
Anatomy	1,046	24	2	61	23	682	4	250
Biochemistry	5,216	79	13	301	83	2,923	37	1,780
Biology	13,486	455	41	623	553	9,211	490	2,113
Biometry/epidemiology	2,066	73	6	99	90	1,275	13	510
Biophysics	663	6	2	30	5	385	0	235
Botany	2,661	40	6	46	37	1,602	25	905
Cell biology	2,804	40	5	152	71	1,869	27	640
Ecology	1,226	11	5	19	26	976	23	166
Entomology/parasitology	1,171	19	1	32	37	702	16	364
Genetics	1,524	29	0	112	22	1,030	4	327
Microbiology	4,937	94	6	239	118	3,077	129	1,274
Nutrition	4,251	131	90	163	89	2,403	125	1,250
Pathology	1,517	37	3	68	18	978	44	369
Pharmacology	2,436	83	14	140	65	1,452	35	647
Physiology	2,329	86	2	168	49	1,336	33	655
Zoology	2,192	37	7	27	34	1,693	36	358
Biosciences, n.e.c.	2,595	75	3	145	71	1,642	52	607
Psychology	51,592	2,493	253	1,046	2,432	41,155	2,215	1,998
Social sciences	81,279	5,253	368	1,959	3,003	51,889	3,079	15,728
Agricultural economics	2,366	60	4	33	42	1,124	11	1,092
Anthropology	6,695	129	67	116	205	5,093	266	819
Economics (except agricultural)	12,709	300	53	392	291	5,723	564	5,386
Geography	3,785	82	18	79	82	2,928	90	506
History and philosophy of science	383	6	0	8	6	302	4	57
Linguistics	3,452	145	7	90	132	1,726	92	1,260
Political science	31,929	2,779	114	780	1,439	21,831	1,391	3,595
Sociology	8,314	664	54	208	323	5,261	223	1,581
Sociology/anthropology	1,028	112	1	10	32	690	26	157
Social sciences, n.e.c.	10,618	976	50	243	451	7,211	412	1,275
Total, health fields	60,451	2,846	247	1,984	2,239	46,459	2,014	4,662
Dentistry	1,030	26	1	71	29	624	35	244
Neurology	1,006	17	4	68	27	708	5	177
Nursing	22,289	1,108	105	524	569	18,997	586	400
Pharmaceutical sciences	3,152	151	2	212	95	1,361	179	1,152
Preventive medicine/community health	8,595	569	49	420	651	5,451	219	1,236
Speech pathology/audiology	9,319	379	39	121	338	7,745	313	384
Veterinary sciences	894	43	1	19	12	557	24	238
Clinical medicine, n.e.c.	2,064	69	6	183	55	1,312	71	368
Health related, n.e.c.	12,102	484	40	366	463	9,704	582	463

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 3. Full-time science and engineering graduate students by source and type of major support in all institutions according to highest degree granted: 1991

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Highest degree granted and source of major support	Total	Fellowships	Traineeships	Research assistantships	Teaching assistantships	Other types of support
In all institutions:						
Total, all sources	308,669	27,188	15,560	84,901	65,538	115,482
Federal, total	63,444	7,517	9,807	40,609	554	4,957
Dept of Defense	9,195	694	148	5,458	0	2,895
Dept of HHS, total	20,594	1,148	7,893	11,000	114	439
NIH	16,033	950	4,829	9,869	90	295
Other HHS	4,561	198	3,064	1,131	24	144
NSF	12,626	2,246	98	10,089	110	83
USDA	3,065	102	33	2,802	33	95
All other Federal	17,964	3,327	1,635	11,260	297	1,445
Institutional support	126,136	13,557	4,937	31,433	64,401	11,808
Other outside support, total	27,064	6,114	816	12,859	583	6,692
All other U.S.	20,416	3,798	633	12,034	583	3,368
Foreign	6,648	2,316	183	825	0	3,324
Self-support	92,025	0	0	0	0	92,025
Doctorate-granting:						
Total, all sources	286,756	26,530	14,883	82,719	62,881	99,743
Federal, total	61,810	7,341	9,377	40,021	503	4,568
Dept of Defense	9,083	687	143	5,401	0	2,852
Dept of HHS, total	20,137	1,140	7,565	10,898	112	422
NIH	15,923	946	4,816	9,781	88	292
Other HHS	4,214	194	2,749	1,117	24	130
NSF	12,538	2,229	97	10,032	101	79
USDA	3,002	99	32	2,744	33	94
All other Federal	17,050	3,186	1,540	10,946	257	1,121
Institutional support	120,563	13,151	4,735	29,938	61,820	10,919
Other outside support, total	26,561	6,038	771	12,760	558	6,434
All other U.S.	20,020	3,735	589	11,943	558	3,195
Foreign	6,541	2,303	182	817	0	3,239
Self-support	77,822	0	0	0	0	77,822
Master's-granting:						
Total, all sources	21,913	658	677	2,182	2,657	15,739
Federal, total	1,634	176	430	588	51	389
Dept of Defense	112	7	5	57	0	43
Dept of HHS, total	457	8	328	102	2	17
NIH	110	4	13	88	2	3
Other HHS	347	4	315	14	0	14
NSF	88	17	1	57	9	4
USDA	63	3	1	58	0	1
All other Federal	914	141	95	314	40	324
Institutional support	5,573	406	202	1,495	2,581	889
Other outside support, total	503	76	45	99	25	258
All other U.S.	396	63	44	91	25	173
Foreign	107	13	1	8	0	85
Self-support	14,203	0	0	0	0	14,203

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 4. Science and engineering graduate students in all institutions by enrollment status and field: 1975-91

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Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric, and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	329,202	235,055	26,310	12,289	16,918	8,415	10,659	46,530	36,191	77,743
1976	334,383	239,021	26,631	13,034	17,092	8,627	11,239	47,845	37,458	77,095
1977	345,962	243,229	26,855	13,658	16,069	9,108	11,606	49,337	38,617	77,979
1978 1/....	345,187	239,966	26,379	13,484	15,077	9,925	11,753	48,600	38,188	76,560
1979	358,844	248,209	26,695	13,854	15,051	11,690	12,160	48,329	39,777	80,653
1980	368,390	252,218	26,945	14,208	15,350	13,578	12,357	47,726	40,617	81,437
1981	376,533	253,247	27,369	14,422	15,906	16,437	12,206	46,794	40,674	79,439
1982	383,549	255,867	28,187	15,174	17,178	19,812	12,422	46,106	40,082	76,906
1983	392,376	257,204	29,456	15,590	17,380	23,616	12,396	45,771	40,912	72,083
1984 2/....	396,449	257,975	30,056	15,655	17,459	25,810	12,181	45,892	40,937	69,985
1985 2/....	405,432	263,394	30,981	15,591	17,580	29,844	11,499	46,276	41,173	70,450
1986 2/....	416,442	266,907	32,248	15,210	17,967	31,397	11,433	46,912	41,417	70,323
1987 2/....	421,441	269,873	32,730	14,522	18,524	32,137	11,095	47,138	42,327	71,400
1988	425,752	273,662	32,962	14,040	19,103	32,554	11,094	47,989	44,154	71,766
1989	434,861	280,372	33,619	13,849	19,338	32,598	11,126	49,257	46,046	74,539
1990	444,346	287,969	33,621	14,105	19,782	34,373	11,277	49,483	48,243	77,085
1991	475,691	300,833	34,900	14,747	19,992	34,728	11,475	52,120	51,592	81,279
	Full-time									
1975	220,123	164,793	21,916	9,677	10,695	4,473	8,839	37,000	24,105	48,088
1976	223,855	168,157	22,252	10,219	10,952	4,748	9,400	38,002	25,643	46,941
1977	227,187	169,448	22,505	10,556	10,365	4,604	9,653	38,502	25,703	47,560
1978 1/....	225,072	165,537	22,158	10,511	9,804	4,926	9,598	38,122	24,963	45,455
1979	232,376	169,378	22,535	10,724	9,667	5,853	9,879	38,106	25,859	46,755
1980	238,868	172,073	22,918	10,969	9,902	6,587	10,070	37,812	26,678	47,137
1981	242,777	172,586	23,308	11,038	10,154	7,445	10,165	37,426	26,715	46,335
1982	245,378	172,360	24,038	11,436	10,814	9,171	9,971	36,829	25,812	44,289
1983	252,846	176,007	25,205	12,068	10,957	10,687	9,926	36,862	26,693	43,609
1984 2/....	254,735	176,433	25,852	11,837	11,311	11,587	9,851	37,234	26,102	42,659
1985 2/....	258,241	179,126	26,669	11,458	11,818	14,101	9,191	37,141	25,751	42,997
1986 2/....	267,075	183,418	27,764	11,347	12,390	15,310	9,314	37,917	26,469	42,907
1987 2/....	271,772	186,023	28,414	10,543	13,044	15,572	9,063	38,529	27,308	43,550
1988	276,225	188,593	28,574	10,299	13,514	15,393	9,072	39,522	28,366	43,853
1989	283,849	193,532	29,207	10,143	13,695	15,797	9,001	40,680	29,608	45,401
1990	288,981	197,825	29,042	10,273	13,834	16,859	9,052	40,420	30,694	47,651
1991	308,669	206,668	30,131	10,414	14,259	16,552	9,238	42,929	32,382	50,763
	Part-time									
1975	109,079	70,262	4,394	2,612	6,223	3,942	1,820	9,530	12,086	29,655
1976	110,528	70,864	4,379	2,815	6,140	3,879	1,839	9,843	11,815	30,154
1977	118,775	73,781	4,350	3,102	5,704	4,504	1,953	10,835	12,914	30,419
1978 1/....	120,115	74,429	4,221	2,973	5,273	4,992	2,155	10,478	12,225	31,105
1979	126,468	78,831	4,160	3,130	5,384	5,837	2,281	10,223	13,918	33,898
1980	129,522	80,145	4,027	3,239	5,448	6,991	2,287	9,914	13,939	34,300
1981	133,756	80,661	4,061	3,384	5,752	8,992	2,041	9,368	13,959	33,104
1982	138,171	83,507	4,149	3,738	6,364	10,641	2,451	9,277	14,270	32,617
1983	139,530	81,197	4,251	3,522	6,423	12,929	2,470	8,909	14,219	28,474
1984 2/....	141,714	81,542	4,204	3,818	6,148	14,223	2,330	8,658	14,835	27,326
1985 2/....	147,191	84,268	4,312	4,133	5,762	15,743	2,308	9,135	15,422	27,453
1986 2/....	149,367	83,489	4,484	3,863	5,577	16,087	2,119	8,995	14,948	27,416
1987 2/....	149,669	83,850	4,316	3,979	5,480	16,565	2,032	8,609	15,019	27,850
1988	149,527	85,069	4,388	3,741	5,589	17,161	2,022	8,467	15,788	27,913
1989	151,012	86,840	4,412	3,706	5,643	16,801	2,125	8,577	16,438	29,138
1990	155,365	90,144	4,579	3,832	5,948	17,514	2,225	9,063	17,549	29,434
1991	167,022	94,165	4,769	4,333	5,733	18,176	2,237	9,191	19,210	30,516

See explanatory information, if any, and SOURCE(S) at end of table.

Table 4. Science and engineering graduate students in all institutions by enrollment status and field: 1975-91

Year	Engineering									Health fields
	Engineering, total	Aerospace engineering	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	68,360	1,670	5,336	12,560	16,320	11,663	8,601	2,352	9,858	25,787
1976	66,750	1,477	5,581	11,995	15,926	10,687	8,313	2,375	10,396	28,612
1977	68,782	1,518	5,580	12,352	17,406	10,438	8,722	2,559	10,207	33,951
1978 1/	68,661	1,460	5,751	12,771	17,365	9,569	8,704	2,569	10,472	36,560
1979	71,807	1,481	6,029	12,836	17,715	10,714	9,251	2,756	11,025	38,828
1980	74,465	1,737	6,518	13,111	19,132	9,737	9,888	2,910	11,432	41,707
1981	79,758	1,883	7,017	14,103	20,113	9,797	10,618	3,125	13,102	43,528
1982	83,898	1,941	7,775	14,146	21,927	9,641	11,467	3,124	13,877	43,784
1983	91,111	2,305	8,300	14,921	25,116	9,373	12,911	3,447	14,738	44,061
1984 2/	92,780	2,340	8,117	15,203	26,198	9,535	13,855	3,657	13,875	45,694
1985 2/	96,160	2,538	7,932	14,916	28,026	10,841	14,157	3,943	13,807	45,878
1986 2/	102,140	2,804	7,759	14,987	29,799	11,888	15,713	4,208	14,982	47,395
1987 2/	103,889	3,015	7,844	14,718	31,214	12,457	16,278	4,366	13,997	47,679
1988	103,159	3,223	7,360	14,822	31,837	11,731	16,207	4,335	13,644	48,931
1989	104,319	3,454	7,125	14,919	33,055	11,458	16,239	4,589	13,480	50,170
1990	107,329	3,866	7,327	15,454	33,583	11,611	16,455	4,921	14,112	49,048
1991	114,407	4,041	7,838	17,265	35,272	13,333	17,820	5,149	13,689	60,451
	Full-time									
1975	37,813	1,245	3,743	7,363	8,278	4,152	4,931	1,787	6,314	17,517
1976	36,950	1,165	4,014	7,025	8,147	3,578	4,919	1,860	6,242	18,748
1977	37,225	1,187	4,174	7,111	8,528	3,343	4,883	1,951	6,048	20,514
1978 1/	37,913	1,138	4,258	7,673	8,512	3,256	4,952	1,973	6,151	21,622
1979	40,017	1,152	4,555	7,637	9,039	3,743	5,428	2,135	6,328	22,981
1980	42,720	1,327	4,863	7,964	9,963	3,764	5,841	2,254	6,744	24,075
1981	45,851	1,483	5,382	8,805	10,450	3,639	6,422	2,454	7,216	24,340
1982	49,865	1,522	6,084	9,398	11,533	3,827	7,267	2,478	7,756	23,153
1983	53,931	1,840	6,489	9,807	13,203	3,322	8,330	2,704	8,236	22,908
1984 2/	55,157	1,854	6,348	10,089	13,857	3,433	8,698	2,872	8,006	23,145
1985 2/	55,938	1,994	6,123	9,760	14,752	3,517	8,875	3,093	7,824	23,177
1986 2/	60,227	2,154	6,166	9,982	16,222	3,875	9,789	3,370	8,669	23,430
1987 2/	61,885	2,372	6,264	9,651	17,040	4,233	10,164	3,436	8,725	23,864
1988	63,187	2,533	5,958	9,957	17,653	4,398	10,426	3,464	8,798	24,445
1989	64,546	2,772	5,788	9,974	18,396	4,761	10,464	3,715	8,676	25,771
1990	65,692	3,010	5,853	10,074	18,567	4,863	10,662	3,922	8,741	25,464
1991	71,230	3,314	6,309	11,214	19,988	5,705	11,654	4,059	8,987	30,771
	Part-time									
1975	30,547	425	1,593	5,197	8,042	7,511	3,670	565	3,544	8,270
1976	29,800	312	1,567	4,970	7,779	7,109	3,394	515	4,154	9,864
1977	31,557	331	1,406	5,241	8,878	7,095	3,839	608	4,159	13,437
1978 1/	30,748	322	1,493	5,098	8,863	6,313	3,752	596	4,321	14,938
1979	31,790	329	1,474	5,199	8,676	6,971	3,823	621	4,697	15,847
1980	31,745	410	1,655	5,147	9,169	5,973	4,047	656	4,688	17,632
1981	33,907	400	1,635	5,298	9,663	6,158	4,196	671	5,886	19,188
1982	34,033	419	1,691	4,748	10,394	5,814	4,200	646	6,121	20,631
1983	37,180	465	1,811	5,114	11,913	6,051	4,581	743	6,502	21,153
1984 2/	37,623	486	1,769	5,114	12,341	6,102	5,157	785	5,869	22,549
1985 2/	40,222	544	1,809	5,156	13,274	7,324	5,282	850	5,983	22,701
1986 2/	41,913	650	1,593	5,005	13,577	8,013	5,924	838	6,313	23,965
1987 2/	42,004	643	1,580	5,067	14,174	8,224	6,114	930	5,272	23,815
1988	39,972	690	1,402	4,865	14,184	7,333	5,781	871	4,846	24,486
1989	39,773	682	1,337	4,945	14,659	6,697	5,775	874	4,804	24,399
1990	41,637	856	1,474	5,380	15,016	6,748	5,793	999	5,371	23,584
1991	43,177	727	1,529	6,051	15,284	7,628	6,166	1,090	4,702	29,680

1/ Master's-granting institutions were not surveyed in 1978; totals include estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 5. Science and engineering graduate students in all institutions, by field: 1983-91

Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	392,376	396,449	405,432	416,442	421,441	425,752	434,861	444,346	475,691
Total, science & engineering fields	348,315	350,755	359,554	369,047	373,762	376,821	384,691	395,298	415,240
Engineering, total	91,111	92,780	96,160	102,140	103,889	103,159	104,319	107,329	114,407
Aerospace	2,305	2,340	2,538	2,804	3,015	3,223	3,454	3,866	4,041
Agricultural	969	954	941	1,054	1,063	1,039	1,031	939	983
Biomedical	1,244	1,345	1,373	1,549	1,689	1,755	1,919	2,112	2,233
Chemical	7,563	7,373	7,150	7,012	7,026	6,618	6,460	6,675	7,127
Civil	14,921	15,203	14,916	14,987	14,718	14,822	14,919	15,454	17,265
Electrical	25,116	26,198	28,026	29,799	31,214	31,837	33,055	33,583	35,272
Engineering science	2,261	2,153	2,098	2,362	2,343	2,386	2,077	2,011	2,154
Industrial	9,373	9,535	10,841	11,888	12,457	11,731	11,458	11,611	13,333
Mechanical	12,911	13,855	14,157	15,713	16,278	16,207	16,239	16,455	17,820
Metallurgical/materials	3,447	3,657	3,943	4,208	4,366	4,335	4,589	4,921	5,149
Mining	524	502	489	512	513	489	418	437	489
Nuclear	1,203	1,234	1,220	1,265	1,279	1,303	1,323	1,278	1,282
Petroleum	737	744	782	747	818	742	665	652	711
Engineering, n.e.c.	8,537	7,687	7,686	8,240	7,110	6,672	6,712	7,335	6,548
Sciences, total	257,204	257,975	263,394	266,907	269,873	273,662	280,372	287,969	300,833
Physical sciences	29,456	30,056	30,981	32,248	32,730	32,962	33,619	33,621	34,900
Astronomy	618	639	671	689	722	731	789	810	829
Chemistry	17,796	17,752	18,300	18,737	18,819	18,572	18,812	18,695	19,422
Physics	10,806	11,331	11,672	12,439	12,807	13,308	13,657	13,760	14,221
Physical sciences, n.e.c.	236	334	338	383	382	351	361	356	428
Earth, atmospheric, and ocean sciences	15,590	15,655	15,591	15,210	14,522	14,040	13,849	14,105	14,747
Atmospheric sciences	896	907	964	961	952	940	912	929	968
Geosciences	10,321	10,370	10,294	9,819	8,998	8,465	8,058	7,714	7,628
Oceanography	2,063	2,102	2,081	2,128	2,127	2,033	2,207	2,248	2,293
Earth, atmos., and ocean sci., n.e.c.	2,310	2,276	2,252	2,302	2,445	2,602	2,672	3,214	3,858
Mathematical sciences	17,380	17,459	17,580	17,967	18,524	19,103	19,338	19,782	19,992
Computer sciences	23,616	25,810	29,844	31,397	32,137	32,554	32,598	34,373	34,728
Agricultural sciences	12,396	12,181	11,499	11,433	11,095	11,094	11,126	11,277	11,475
Biological sciences	45,771	45,892	46,276	46,912	47,138	47,989	49,257	49,483	52,120
Anatomy	1,037	1,029	993	973	1,011	1,056	1,078	996	1,046
Biochemistry	4,205	4,462	4,666	4,885	4,823	4,933	5,094	5,021	5,216
Biology	13,051	12,890	12,721	12,666	12,493	12,557	12,920	13,056	13,486
Biometry/epidemiology	1,156	1,004	1,360	1,434	1,610	1,735	1,777	1,923	2,066
Biophysics	450	433	441	547	591	592	655	599	663
Botany	3,299	3,251	3,188	3,149	3,005	2,936	2,844	2,567	2,661
Cell biology	1,182	1,256	1,429	1,716	1,964	2,078	2,234	2,427	2,804
Ecology	1,007	1,088	1,028	1,012	963	1,028	1,109	1,177	1,226
Entomology/parasitology	1,475	1,438	1,342	1,306	1,244	1,240	1,181	1,173	1,171
Genetics	1,035	1,059	1,120	1,262	1,314	1,289	1,365	1,331	1,524
Microbiology	4,262	4,326	4,447	4,374	4,455	4,774	4,827	4,789	4,937
Nutrition	4,351	4,277	4,314	4,321	4,288	4,228	4,259	4,268	4,251
Pathology	1,449	1,454	1,346	1,383	1,398	1,383	1,416	1,403	1,517
Pharmacology	2,069	2,050	2,107	2,080	2,077	2,132	2,272	2,297	2,436
Physiology	1,994	2,160	2,211	2,220	2,213	2,220	2,206	2,276	2,329
Zoology	2,430	2,303	2,135	2,083	2,113	2,034	2,089	2,038	2,192
Biosciences, n.e.c.	1,319	1,412	1,428	1,501	1,576	1,774	1,931	2,142	2,595
Psychology	40,912	40,937	41,173	41,417	42,327	44,154	46,046	48,243	51,592
Social sciences	72,083	69,985	70,450	70,323	71,400	71,766	74,539	77,085	81,279
Agricultural economics	2,295	2,279	2,268	2,248	2,203	2,259	2,276	2,273	2,366
Anthropology	5,644	5,590	5,631	5,805	5,710	5,945	6,128	6,465	6,695
Economics (except agricultural)	13,064	12,507	12,430	12,103	12,020	12,036	12,143	12,186	12,709
Geography	3,060	3,035	2,936	3,055	3,223	3,208	3,511	3,543	3,785
History and philosophy of science	253	274	272	266	294	288	342	369	383
Linguistics	3,022	3,160	3,055	3,109	3,282	3,243	3,340	3,439	3,452
Political science	28,050	25,921	27,012	27,251	27,608	27,884	29,303	29,754	31,929
Sociology	6,920	6,740	6,567	6,454	6,945	7,045	7,358	7,739	8,314
Sociology/anthropology	1,200	1,075	1,034	1,021	982	991	1,022	1,183	1,028
Social sciences, n.e.c.	8,575	9,404	9,245	9,011	9,133	8,867	9,116	10,134	10,618
Total, health fields	44,061	45,694	45,878	47,395	47,679	48,931	50,170	49,048	60,451
Dentistry	776	854	836	929	1,049	1,078	998	941	1,030
Neurology	261	317	336	382	494	600	732	802	1,006
Nursing	16,945	17,987	17,083	17,512	17,195	17,128	16,634	14,173	22,289
Pharmaceutical sciences	2,641	2,519	2,553	2,682	2,607	2,613	2,917	2,790	3,152
Preventive medicine/community health ...	6,679	6,841	7,287	7,230	7,496	7,679	7,689	8,243	8,595
Speech pathology/audiology	7,836	7,745	7,986	7,957	7,402	7,668	8,088	8,435	9,319
Veterinary sciences	466	557	637	630	731	752	801	900	894
Clinical medicine, n.e.c.	1,625	1,556	1,709	1,670	1,741	1,806	1,796	1,781	2,064
Health related, n.e.c.	6,832	7,318	7,451	8,403	8,964	9,607	10,515	10,983	12,102

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 6. Science and engineering graduate students in all institutions, by enrollment status, citizenship, and racial/ethnic background: 1983-91

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Enrollment status, citizenship, and racial/ethnic background	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total enrollment	392,376	396,449	405,432	416,442	421,441	425,752	434,861	444,346	475,691
Total U.S. citizens	318,939	321,215	325,416	329,067	329,261	328,240	332,629	338,339	362,621
Black, non-Hispanic	12,871	12,676	12,498	12,417	12,408	13,416	13,982	14,852	16,542
American Indian/Alaskan Native	1,101	981	874	886	945	1,102	1,057	1,238	1,448
Asian/Pacific Islander	10,325	11,147	12,997	13,850	15,709	16,457	17,068	18,561	20,201
Hispanic	10,329	10,068	10,159	10,184	10,468	10,919	11,231	11,905	13,407
White, non-Hispanic	260,449	259,821	259,977	265,116	265,727	267,404	269,339	275,445	291,631
Other or unknown	23,864	26,522	28,911	26,614	24,004	18,942	19,952	16,338	19,392
Non-U.S. citizens	73,437	75,234	80,016	87,375	92,180	97,512	102,232	106,007	113,070
Full-time enrollment	252,846	254,735	258,241	267,075	271,772	276,225	283,849	288,981	308,669
Total U.S. citizens	190,810	191,150	189,898	191,881	192,930	192,500	196,844	198,742	213,354
Black, non-Hispanic	6,617	6,582	6,449	6,406	6,461	7,030	7,611	7,919	8,949
American Indian/Alaskan Native	691	633	558	570	611	678	657	749	858
Asian/Pacific Islander	6,217	6,936	7,824	8,577	9,808	10,231	10,708	11,522	12,584
Hispanic	5,936	5,911	6,132	6,229	6,238	6,532	6,939	7,427	8,327
White, non-Hispanic	159,929	159,080	155,599	159,078	158,924	159,316	161,714	164,081	173,666
Other or unknown	11,420	12,008	13,336	11,021	10,888	8,713	9,215	7,044	8,970
Non-U.S. citizens	62,036	63,585	68,343	75,194	78,842	83,725	87,005	90,239	95,315
Part-time enrollment	139,530	141,714	147,191	149,367	149,669	149,527	151,012	155,365	167,022
Total U.S. citizens	128,129	130,065	135,518	137,186	136,331	135,740	135,785	139,597	149,267
Black, non-Hispanic	6,254	6,094	6,049	6,011	5,947	6,386	6,371	6,933	7,593
American Indian/Alaskan Native	410	348	316	316	334	424	400	489	590
Asian/Pacific Islander	4,108	4,211	5,173	5,273	5,901	6,226	6,360	7,039	7,617
Hispanic	4,393	4,157	4,027	3,955	4,230	4,387	4,292	4,478	5,080
White, non-Hispanic	100,520	100,741	104,378	106,038	106,803	108,088	107,625	111,364	117,965
Other or unknown	12,444	14,514	15,575	15,593	13,116	10,229	10,737	9,294	10,422
Non-U.S. citizens	11,401	11,649	11,673	12,181	13,338	13,787	15,227	15,768	17,755

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 7. Male science and engineering graduate students in all institutions, by field: 1983-91

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Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	252,066	253,571	259,307	265,674	268,598	266,964	270,422	274,513	287,385
Total, science & engineering fields	241,386	242,806	248,250	254,318	256,513	255,088	258,011	262,104	273,529
Engineering, total	81,320	82,439	85,000	89,675	90,927	89,952	90,644	92,625	98,551
Aerospace	2,182	2,208	2,375	2,604	2,791	2,996	3,214	3,579	3,716
Agricultural	896	872	863	970	967	953	944	838	858
Biomedical	974	1,054	1,082	1,203	1,292	1,316	1,450	1,571	1,649
Chemical	6,547	6,401	6,146	5,973	5,886	5,543	5,431	5,531	5,867
Civil	13,061	13,175	12,767	12,836	12,605	12,525	12,481	12,770	14,101
Electrical	23,071	24,010	25,617	26,909	28,138	28,582	29,564	29,885	31,397
Engineering science	1,971	1,861	1,858	2,065	2,056	2,119	1,829	1,716	1,866
Industrial	7,829	7,844	8,938	9,664	10,157	9,541	9,270	9,395	10,931
Mechanical	12,106	12,899	13,146	14,554	14,995	14,792	14,836	15,029	16,293
Metallurgical/materials	2,999	3,189	3,340	3,533	3,637	3,579	3,780	4,026	4,164
Mining	477	458	459	476	473	441	372	379	439
Nuclear	1,119	1,146	1,113	1,142	1,151	1,176	1,182	1,123	1,105
Petroleum	665	684	716	699	764	693	637	621	659
Engineering, n.e.c.	7,423	6,638	6,580	7,047	6,015	5,696	5,654	6,162	5,506
Sciences, total	160,066	160,367	163,250	164,643	165,586	165,136	167,367	169,479	174,978
Physical sciences	23,578	23,898	24,474	25,385	25,614	25,465	25,817	25,690	26,302
Astronomy	526	541	563	568	602	591	649	645	657
Chemistry	13,285	13,113	13,513	13,713	13,645	13,108	13,150	12,966	13,153
Physics	9,605	10,040	10,175	10,862	11,134	11,557	11,789	11,854	12,224
Physical sciences, n.e.c.	162	204	223	242	233	209	229	225	268
Earth, atmospheric, and ocean sciences	11,632	11,726	11,606	11,215	10,708	10,170	9,924	9,983	10,251
Atmospheric sciences	766	769	807	782	784	777	734	744	778
Geosciences	7,808	7,882	7,810	7,463	6,834	6,370	6,092	5,784	5,605
Oceanography	1,497	1,501	1,471	1,461	1,493	1,388	1,482	1,505	1,491
Earth, atmos., and ocean sci., n.e.c.	1,561	1,574	1,518	1,509	1,597	1,635	1,616	1,950	2,377
Mathematical sciences	12,176	12,285	12,215	12,492	12,929	13,329	13,336	13,573	13,706
Computer sciences	16,968	18,905	22,345	23,613	24,191	24,350	24,663	26,206	26,452
Agricultural sciences	9,263	9,040	8,511	8,470	8,125	8,000	7,986	7,930	7,887
Biological sciences	26,378	26,329	26,311	26,391	26,515	26,560	26,879	26,689	27,823
Anatomy	632	605	569	560	574	598	598	541	547
Biochemistry	2,639	2,793	2,925	2,996	2,928	2,930	3,068	2,968	3,074
Biology	7,521	7,391	7,230	7,149	7,188	7,067	7,140	7,165	7,201
Biometry/epidemiology	547	472	640	666	761	786	754	886	921
Biophysics	338	326	331	410	450	443	493	446	500
Botany	2,091	2,062	1,993	2,014	1,854	1,814	1,754	1,565	1,602
Cell biology	774	789	911	1,044	1,199	1,233	1,290	1,353	1,524
Ecology	666	741	661	630	588	622	661	688	689
Entomology/parasitology	1,090	1,066	992	948	906	881	817	815	830
Genetics	512	547	597	665	673	660	675	648	763
Microbiology	2,385	2,408	2,490	2,429	2,457	2,617	2,588	2,509	2,578
Nutrition	1,326	1,319	1,349	1,307	1,341	1,232	1,252	1,286	1,294
Pathology	873	862	778	816	802	812	821	798	861
Pharmacology	1,328	1,277	1,302	1,267	1,233	1,282	1,302	1,294	1,301
Physiology	1,297	1,388	1,375	1,366	1,378	1,357	1,313	1,327	1,368
Zoology	1,609	1,483	1,372	1,307	1,316	1,246	1,296	1,227	1,311
Biosciences, n.e.c.	750	800	796	817	867	980	1,057	1,173	1,459
Psychology	16,649	16,181	15,738	15,432	15,530	15,563	15,832	15,864	16,601
Social sciences	43,422	42,003	42,050	41,645	41,974	41,699	42,930	43,544	45,956
Agricultural economics	1,807	1,791	1,761	1,747	1,696	1,713	1,694	1,674	1,735
Anthropology	2,438	2,439	2,510	2,460	2,442	2,499	2,548	2,678	2,768
Economics (except agricultural)	9,882	9,487	9,373	9,095	9,000	8,938	8,904	8,859	9,153
Geography	2,051	2,050	1,988	2,071	2,130	2,153	2,317	2,334	2,460
History and philosophy of science	161	187	180	169	198	184	217	235	237
Linguistics	1,217	1,259	1,198	1,252	1,305	1,296	1,344	1,384	1,541
Political science	17,277	16,161	16,492	16,511	16,672	16,420	17,070	16,887	18,065
Sociology	3,255	3,120	3,085	2,942	3,135	3,241	3,392	3,488	3,735
Sociology/anthropology	586	525	496	482	472	443	454	492	459
Social sciences, n.e.c.	4,748	4,984	4,967	4,916	4,924	4,812	4,990	5,513	5,803
Total, health fields	10,680	10,765	11,057	11,356	12,085	11,876	12,411	12,409	13,856
Dentistry	607	666	648	724	770	786	711	668	725
Neurology	189	208	207	236	308	357	438	447	572
Nursing	747	786	765	777	1,058	840	949	706	1,195
Pharmaceutical sciences	1,776	1,635	1,654	1,711	1,587	1,549	1,720	1,675	1,825
Preventive medicine/community health	2,821	2,793	2,968	3,047	3,369	3,181	2,910	3,206	3,368
Speech pathology/audiology	1,006	1,019	1,051	922	724	812	785	789	784
Veterinary sciences	289	346	401	394	453	452	470	512	528
Clinical medicine, n.e.c.	835	762	784	790	842	861	909	946	1,052
Health related, n.e.c.	2,410	2,550	2,579	2,755	2,974	3,038	3,519	3,460	3,807

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 8. Female science and engineering graduate students in all institutions, by field: 1983-91

Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	140,310	142,878	146,125	150,768	152,843	158,788	164,439	169,833	188,306
Total, science & engineering fields	106,929	107,949	111,304	114,729	117,249	121,733	126,680	133,194	141,711
Engineering, total	9,791	10,341	11,160	12,465	12,962	13,207	13,675	14,704	15,856
Aerospace	123	132	163	200	224	227	240	287	325
Agricultural	73	82	78	84	96	86	87	101	125
Biomedical	270	291	291	346	397	439	469	541	584
Chemical	1,016	972	1,004	1,039	1,140	1,075	1,029	1,144	1,260
Civil	1,860	2,028	2,149	2,151	2,113	2,297	2,438	2,684	3,164
Electrical	2,045	2,188	2,409	2,890	3,076	3,255	3,491	3,698	3,875
Engineering science	290	292	240	297	287	267	248	295	288
Industrial	1,544	1,691	1,905	2,224	2,300	2,190	2,188	2,216	2,402
Mechanical	805	956	1,011	1,159	1,283	1,415	1,403	1,426	1,527
Metallurgical/materials	448	468	603	675	729	756	809	895	985
Mining	47	44	30	36	40	48	46	58	50
Nuclear	84	88	107	123	128	127	141	155	177
Petroleum	72	60	66	48	54	49	28	31	52
Engineering, n.e.c.	1,114	1,049	1,106	1,193	1,095	976	1,058	1,173	1,042
Sciences, total	97,138	97,608	100,144	102,264	104,287	108,526	113,005	118,490	125,855
Physical sciences	5,878	6,158	6,507	6,863	7,116	7,497	7,802	7,931	8,598
Astronomy	92	98	108	121	120	140	140	165	172
Chemistry	4,511	4,639	4,787	5,024	5,174	5,464	5,662	5,729	6,269
Physics	1,201	1,291	1,497	1,577	1,673	1,751	1,868	1,906	1,997
Physical sciences, n.e.c.	74	130	115	141	149	142	132	131	160
Earth, atmospheric, and ocean sciences	3,958	3,929	3,985	3,995	3,814	3,870	3,925	4,122	4,496
Atmospheric sciences	130	138	157	179	168	163	178	185	190
Geosciences	2,513	2,488	2,484	2,356	2,164	2,095	1,966	1,930	2,023
Oceanography	566	601	610	667	634	645	725	743	802
Earth, atmos., and ocean sci., n.e.c.	749	702	734	793	848	967	1,056	1,264	1,481
Mathematical sciences	5,204	5,174	5,365	5,475	5,595	5,774	6,002	6,209	6,286
Computer sciences	6,648	6,905	7,499	7,784	7,946	8,204	7,935	8,167	8,276
Agricultural sciences	3,133	3,141	2,988	2,963	2,970	3,094	3,140	3,347	3,588
Biological sciences	19,393	19,563	19,965	20,521	20,623	21,429	22,378	22,794	24,297
Anatomy	405	424	424	413	437	458	480	455	499
Biochemistry	1,566	1,669	1,741	1,889	1,895	2,003	2,026	2,053	2,142
Biology	5,530	5,499	5,491	5,517	5,305	5,490	5,780	5,891	6,285
Biometry/epidemiology	609	532	720	768	849	949	1,023	1,037	1,145
Biophysics	112	107	110	137	141	149	162	153	163
Botany	1,208	1,189	1,195	1,135	1,151	1,122	1,090	1,002	1,059
Cell biology	408	467	518	672	765	845	944	1,074	1,280
Ecology	341	347	367	382	375	406	448	489	537
Entomology/parasitology	385	372	350	358	338	359	364	358	341
Genetics	523	512	523	597	641	629	690	683	761
Microbiology	1,877	1,918	1,957	1,945	1,998	2,157	2,239	2,280	2,359
Nutrition	3,025	2,958	2,965	3,014	2,947	2,996	3,007	2,982	2,957
Pathology	576	592	568	567	596	571	595	605	656
Pharmacology	741	773	805	813	844	850	970	1,003	1,135
Physiology	697	772	836	854	835	863	893	949	961
Zoology	821	820	763	776	797	788	793	811	881
Biosciences, n.e.c.	569	612	632	684	709	794	874	969	1,136
Psychology	24,263	24,756	25,435	25,985	26,797	28,591	30,214	32,379	34,991
Social sciences	28,661	27,982	28,400	28,678	29,426	30,067	31,609	33,541	35,323
Agricultural economics	488	488	507	501	507	546	582	599	631
Anthropology	3,206	3,151	3,121	3,345	3,268	3,446	3,580	3,787	3,927
Economics (except agricultural)	3,182	3,020	3,057	3,008	3,020	3,098	3,239	3,327	3,556
Geography	1,009	985	948	984	1,093	1,055	1,194	1,209	1,325
History and philosophy of science	92	87	92	97	96	104	125	134	146
Linguistics	1,805	1,901	1,857	1,857	1,977	1,947	1,996	2,055	1,911
Political science	10,773	9,760	10,520	10,740	10,936	11,464	12,233	12,867	13,864
Sociology	3,665	3,620	3,482	3,512	3,810	3,804	3,966	4,251	4,579
Sociology/anthropology	614	550	538	539	510	548	568	691	569
Social sciences, n.e.c.	3,827	4,420	4,278	4,095	4,209	4,055	4,126	4,621	4,815
Total, health fields	33,381	34,929	34,821	36,039	35,594	37,055	37,759	36,639	46,595
Dentistry	169	188	188	205	279	292	287	273	305
Neurology	72	109	129	146	186	243	294	355	434
Nursing	16,198	17,201	16,318	16,735	16,137	16,288	15,685	13,467	21,094
Pharmaceutical sciences	865	884	899	971	1,020	1,064	1,197	1,115	1,327
Preventive medicine/community health	3,858	4,048	4,319	4,183	4,127	4,498	4,779	5,037	5,227
Speech pathology/audiology	6,830	6,726	6,935	7,035	6,678	6,856	7,303	7,646	8,535
Veterinary sciences	177	211	236	236	278	300	331	388	366
Clinical medicine, n.e.c.	790	794	925	880	899	945	887	835	1,012
Health related, n.e.c.	4,422	4,768	4,872	5,648	5,990	6,569	6,996	7,523	8,295

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 9. Full-time science and engineering graduate students in all institutions, by field: 1983-91

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Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	252,846	254,735	258,241	267,075	271,772	276,225	283,849	288,981	308,669
Total, science/engineering fields	229,938	231,590	235,064	243,645	247,908	251,780	258,078	263,517	277,898
Engineering, total	53,931	55,157	55,938	60,227	61,885	63,187	64,546	65,692	71,230
Aerospace	1,840	1,854	1,994	2,154	2,372	2,533	2,772	3,010	3,316
Agricultural	766	773	767	881	924	879	851	793	825
Biomedical	1,031	1,121	1,129	1,294	1,392	1,455	1,611	1,781	1,921
Chemical	5,869	5,734	5,546	5,594	5,620	5,359	5,282	5,387	5,788
Civil	9,807	10,089	9,760	9,982	9,651	9,957	9,974	10,074	11,216
Electrical	13,203	13,657	14,752	16,222	17,040	17,653	18,396	18,567	19,988
Engineering science	1,356	1,272	1,264	1,445	1,373	1,418	1,259	1,243	1,366
Industrial	3,322	3,433	3,517	3,875	4,233	4,398	4,761	4,863	5,705
Mechanical	8,330	8,898	8,875	9,789	10,164	10,426	10,464	10,662	11,654
Metallurgical/materials	2,704	2,872	3,093	3,370	3,436	3,464	3,715	3,922	4,059
Mining	428	424	391	442	435	415	338	334	336
Nuclear	1,052	1,018	1,030	1,059	1,044	1,105	1,112	1,080	1,080
Petroleum	620	614	577	572	644	599	506	466	521
Engineering, n.e.c.	3,603	3,398	3,243	3,548	3,557	3,526	3,505	3,510	3,461
Sciences, total	176,007	176,433	179,126	183,418	186,023	188,593	193,532	197,825	206,668
Physical sciences	25,205	25,852	26,669	27,764	28,414	28,574	29,207	29,062	30,131
Astronomy	585	596	635	654	681	705	762	790	810
Chemistry	15,023	15,123	15,580	15,997	16,235	16,088	16,272	16,032	16,696
Physics	9,495	9,964	10,287	10,957	11,304	11,638	12,040	12,088	12,482
Physical sciences, n.e.c.	102	169	167	156	194	143	133	132	143
Earth, atmospheric, and ocean sciences	12,068	11,837	11,458	11,347	10,543	10,299	10,143	10,273	10,414
Atmospheric sciences	785	776	872	855	824	829	810	828	859
Geosciences	8,203	8,093	7,703	7,384	6,666	6,310	5,985	5,805	5,691
Oceanography	1,612	1,599	1,562	1,694	1,651	1,629	1,799	1,851	1,898
Earth, atmos., and ocean sci., n.e.c.	1,468	1,369	1,321	1,414	1,402	1,531	1,549	1,789	1,966
Mathematical sciences	10,957	11,311	11,818	12,390	13,044	13,514	13,695	13,834	14,259
Computer sciences	10,687	11,587	14,101	15,310	15,572	15,393	15,797	16,859	16,552
Agricultural sciences	9,926	9,851	9,191	9,314	9,063	9,072	9,001	9,052	9,238
Biological sciences	36,862	37,234	37,141	37,917	38,529	39,522	40,680	40,420	42,929
Anatomy	921	936	891	893	924	973	999	907	956
Biochemistry	3,978	4,235	4,463	4,640	4,614	4,743	4,822	4,807	4,967
Biology	9,001	8,965	8,530	8,557	8,674	8,865	9,318	9,201	9,594
Biometry/epidemiology	877	751	996	1,048	1,190	1,236	1,236	1,253	1,446
Biophysics	437	419	381	449	468	544	610	572	645
Botany	2,914	2,863	2,717	2,763	2,596	2,556	2,456	2,214	2,276
Cell biology	1,138	1,209	1,406	1,655	1,886	2,023	2,177	2,359	2,711
Ecology	844	877	876	857	796	836	879	890	936
Entomology/parasitology	1,305	1,264	1,138	1,107	1,062	1,061	1,009	997	1,014
Genetics	964	986	1,057	1,171	1,208	1,187	1,254	1,223	1,416
Microbiology	3,704	3,826	3,879	3,871	4,017	4,309	4,329	4,289	4,409
Nutrition	2,988	3,018	3,040	3,055	3,014	2,876	2,874	2,918	2,959
Pathology	1,056	1,070	1,027	1,055	1,093	1,109	1,149	1,125	1,166
Pharmacology	1,933	1,926	1,993	1,958	1,927	1,992	2,140	2,154	2,308
Physiology	1,766	1,969	1,986	2,005	1,996	2,008	2,057	2,116	2,160
Zoology	2,052	1,863	1,718	1,720	1,787	1,719	1,774	1,618	1,784
Biosciences, n.e.c.	984	1,057	1,043	1,113	1,277	1,485	1,597	1,777	2,182
Psychology	26,693	26,102	25,751	26,469	27,308	28,366	29,608	30,694	32,382
Social sciences	43,609	42,659	42,997	42,907	43,550	43,853	45,401	47,651	50,763
Agricultural economics	2,047	2,027	1,990	1,964	1,857	1,909	1,912	1,961	2,003
Anthropology	3,940	3,968	3,916	4,061	4,086	4,276	4,411	4,787	5,036
Economics (except agricultural)	9,143	8,771	8,938	8,959	8,985	9,021	9,088	9,216	9,730
Geography	2,202	2,175	2,124	2,108	2,290	2,215	2,358	2,380	2,574
History and philosophy of science	229	243	227	237	267	266	303	340	340
Linguistics	2,375	2,319	2,337	2,358	2,449	2,519	2,465	2,506	2,597
Political science	13,443	12,798	13,171	13,410	13,007	13,277	14,013	14,622	16,126
Sociology	4,794	4,745	4,644	4,572	5,026	5,082	5,269	5,668	5,846
Sociology/anthropology	671	606	565	584	560	566	633	768	687
Social sciences, n.e.c.	4,765	5,007	5,085	4,654	5,023	4,722	4,949	5,403	5,824
Total, health fields	22,908	23,145	23,177	23,430	23,864	24,445	25,771	25,464	30,771
Dentistry	701	772	746	816	901	923	850	812	889
Neurology	258	313	334	372	475	590	711	780	978
Nursing	6,204	6,113	5,613	5,634	5,659	5,508	5,331	3,901	6,492
Pharmaceutical sciences	1,768	1,771	1,789	1,841	1,824	1,907	2,117	1,996	2,272
Preventive medicine/community health	3,961	3,955	4,133	4,083	4,143	4,225	4,215	4,505	4,500
Speech pathology/audiology	5,255	5,265	5,446	5,391	4,994	5,247	5,640	5,738	6,646
Veterinary sciences	363	425	515	506	592	606	668	709	717
Clinical medicine, n.e.c.	1,072	1,030	1,145	1,127	1,171	1,233	1,386	1,402	1,612
Health related, n.e.c.	3,326	3,501	3,456	3,660	4,105	4,206	4,853	5,621	6,665

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 10. Full-time science and engineering graduate students in all institutions, by field and source of major support: 1983-91

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Field and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields									
Total, all sources	252,846	254,735	258,241	267,075	271,772	276,225	283,849	288,981	308,669
Federal, total	47,829	47,842	48,902	51,318	53,315	55,440	57,370	57,875	63,444
Dept of Defense	7,010	7,151	7,332	7,943	8,796	9,513	9,190	8,738	9,195
Dept of HHS, total	14,985	15,113	15,634	16,271	17,040	17,876	18,446	18,279	20,594
NIH	10,840	11,000	11,128	11,895	12,903	13,753	14,473	14,731	16,033
Other HHS	4,145	4,113	4,506	4,376	4,137	4,123	3,973	3,548	4,561
NSF	9,523	9,850	10,181	10,832	11,241	11,632	11,894	11,949	12,626
USDA	NA	NA	2,180	2,347	2,696	2,607	2,745	2,719	3,065
All other Federal	16,311	15,728	13,575	13,925	13,542	13,812	15,095	16,190	17,964
Institutional support	98,320	102,379	104,396	109,447	112,430	115,178	119,638	121,083	126,136
Other outside support, total	24,926	24,876	26,612	26,767	25,466	25,758	25,863	25,659	27,064
All other U.S.	15,949	16,697	18,814	19,080	18,329	18,817	19,187	19,266	20,416
Foreign	8,977	8,179	7,798	7,687	7,137	6,941	6,676	6,393	6,648
Self-support	81,771	79,638	78,331	79,543	80,561	79,849	80,978	84,364	92,025
Sciences, total									
Total, all sources	176,007	176,433	179,126	183,418	186,023	188,593	193,532	197,825	206,668
Federal, total	30,090	30,398	31,620	32,943	34,007	35,210	36,806	37,473	40,140
Dept of Defense	2,736	3,065	3,278	3,595	3,972	4,299	3,947	3,700	3,816
Dept of HHS, total	10,162	10,356	10,685	11,292	11,953	12,713	13,388	13,579	14,644
NIH	9,146	9,487	9,590	10,273	10,910	11,788	12,296	12,460	13,369
Other HHS	1,016	869	1,095	1,019	1,043	925	1,092	1,119	1,275
NSF	6,813	7,112	7,454	7,661	7,718	7,776	8,081	8,035	8,295
USDA	NA	NA	1,992	2,111	2,392	2,379	2,489	2,436	2,725
All other Federal	10,379	9,865	8,211	8,284	7,972	8,043	8,901	9,723	10,660
Institutional support	76,995	79,534	80,317	83,288	85,106	87,334	89,950	91,211	93,710
Other outside support, total	15,105	14,494	15,304	14,981	14,230	14,396	14,386	14,056	14,873
All other U.S.	9,051	9,070	10,248	10,027	9,653	9,874	10,236	10,116	10,765
Foreign	6,054	5,424	5,056	4,954	4,577	4,522	4,150	3,940	4,108
Self-support	53,817	52,007	51,885	52,206	52,680	51,653	52,390	55,085	57,945
Physical sciences									
Total, all sources	25,205	25,852	26,669	27,764	28,414	28,574	29,207	29,042	30,131
Federal, total	8,126	8,640	8,821	9,523	9,717	9,857	10,247	10,169	10,850
Dept of Defense	831	1,011	1,024	1,161	1,292	1,475	1,392	1,203	1,228
Dept of HHS, total	1,535	1,628	1,796	2,012	2,097	2,152	2,111	2,056	2,045
NIH	1,437	1,506	1,635	1,847	1,930	2,002	1,981	1,929	1,877
Other HHS	98	122	161	165	167	150	130	127	168
NSF	3,218	3,406	3,516	3,671	3,590	3,656	3,612	3,547	3,579
USDA	NA	NA	35	31	44	32	43	53	61
All other Federal	2,542	2,595	2,450	2,648	2,694	2,542	3,089	3,310	3,937
Institutional support	13,601	13,701	13,962	14,417	14,821	14,860	15,150	14,952	15,096
Other outside support, total	1,705	1,830	2,091	1,931	1,873	1,980	2,007	1,957	2,220
All other U.S.	1,237	1,391	1,656	1,588	1,596	1,662	1,751	1,704	1,910
Foreign	468	439	435	343	277	318	256	253	310
Self-support	1,773	1,681	1,795	1,893	2,003	1,877	1,803	1,964	1,965
Earth, atmospheric, and ocean sciences									
Total, all sources	12,068	11,837	11,458	11,347	10,543	10,299	10,143	10,273	10,414
Federal, total	2,877	2,852	2,960	3,033	2,868	2,799	2,903	2,957	3,085
Dept of Defense	365	372	418	453	499	461	435	435	433
Dept of HHS, total	38	41	41	39	58	51	25	34	55
NIH	15	30	26	25	24	19	17	21	22
Other HHS	23	11	15	14	34	32	8	13	33
NSF	1,325	1,341	1,374	1,357	1,261	1,236	1,253	1,186	1,198
USDA	NA	NA	42	18	33	45	43	63	74
All other Federal	1,149	1,098	1,085	1,166	1,017	1,006	1,147	1,239	1,325
Institutional support	4,269	4,388	4,170	4,390	4,226	4,343	4,318	4,263	4,361
Other outside support, total	1,293	1,256	1,397	1,183	1,001	1,039	999	953	990
All other U.S.	985	937	1,034	869	674	675	658	682	702
Foreign	308	319	363	314	327	364	341	271	288
Self-support	3,629	3,341	2,931	2,741	2,448	2,118	1,923	2,100	1,978
Mathematical sciences									
Total, all sources	10,957	11,311	11,818	12,390	13,044	13,514	13,695	13,834	14,259
Federal, total	760	762	935	999	1,090	1,190	1,221	1,335	1,502
Dept of Defense	310	304	386	432	438	513	395	367	376
Dept of HHS, total	41	26	21	24	30	28	36	49	69
NIH	28	22	18	19	24	25	28	39	64
Other HHS	13	4	3	5	6	3	8	10	5
NSF	223	279	321	357	436	463	475	491	452
USDA	NA	NA	13	18	16	20	22	23	21
All other Federal	186	153	194	168	170	166	293	405	584
Institutional support	7,493	7,767	8,106	8,485	8,836	9,132	9,385	9,461	9,532
Other outside support, total	511	632	549	598	548	616	593	563	605
All other U.S.	174	272	257	253	239	350	356	308	321
Foreign	337	360	292	345	309	266	237	255	284
Self-support	2,193	2,150	2,228	2,308	2,570	2,576	2,496	2,475	2,620

See explanatory information, if any, and SOURCE(S) at end of table.

Table 10. Full-time science and engineering graduate students in all institutions, by field and source of major support: 1983-91

Field and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Computer sciences									
Total, all sources	10,687	11,587	14,101	15,310	15,572	15,393	15,797	16,859	16,552
Federal, total	1,130	1,269	1,638	1,892	2,084	2,226	2,331	2,412	2,533
Dept of Defense	475	630	860	1,037	1,137	1,214	1,164	1,129	1,121
Dept of HHS, total	29	25	21	45	62	64	60	71	71
NIH	26	24	20	43	61	64	53	62	65
Other HHS	3	1	1	2	1	0	7	9	6
NSF	386	431	502	527	623	634	779	819	906
USDA	NA	NA	4	3	17	10	7	14	8
All other Federal	240	183	251	280	265	304	321	379	427
Institutional support	3,216	3,691	4,308	4,573	5,000	5,153	5,361	5,640	5,386
Other outside support, total	834	818	1,378	1,554	1,283	1,300	1,265	1,264	1,358
All other U.S.	576	563	1,024	1,218	983	971	933	917	1,002
Foreign	258	255	354	336	300	329	332	347	356
Self-support	5,507	5,809	6,777	7,291	7,205	6,714	6,840	7,543	7,275
Agricultural sciences									
Total, all sources	9,926	9,851	9,191	9,314	9,063	9,072	9,001	9,052	9,238
Federal, total	1,566	1,406	1,556	1,656	1,719	1,771	1,794	1,775	1,858
Dept of Defense	15	17	28	17	30	32	13	18	30
Dept of HHS, total	25	18	17	15	29	32	28	36	36
NIH	19	17	17	14	22	31	17	31	28
Other HHS	6	1	0	1	7	1	11	5	8
NSF	70	70	96	72	61	50	47	62	62
USDA	NA	NA	686	896	945	955	1,064	949	1,086
All other Federal	1,456	1,301	729	656	654	702	642	710	644
Institutional support	3,698	3,987	3,502	3,640	3,598	3,482	3,452	3,475	3,562
Other outside support, total	2,147	1,991	1,895	1,792	1,626	1,718	1,658	1,741	1,687
All other U.S.	964	932	1,017	921	817	936	1,009	1,095	1,042
Foreign	1,183	1,059	878	871	809	782	649	646	645
Self-support	2,515	2,467	2,238	2,226	2,120	2,101	2,097	2,061	2,131
Biological sciences									
Total, all sources	36,862	37,234	37,141	37,917	38,529	39,522	40,680	40,420	42,929
Federal, total	10,295	10,460	10,731	11,159	11,872	12,524	13,305	13,438	14,501
Dept of Defense	243	241	220	189	248	284	257	214	238
Dept of HHS, total	7,119	7,253	7,415	7,906	8,348	8,944	9,632	9,739	10,641
NIH	6,809	7,030	7,058	7,537	8,014	8,677	9,279	9,374	10,146
Other HHS	310	223	357	369	334	267	353	365	495
NSF	1,062	1,078	1,074	1,081	1,137	1,122	1,256	1,208	1,277
USDA	NA	NA	810	819	984	995	960	975	1,075
All other Federal	1,871	1,888	1,212	1,164	1,155	1,179	1,200	1,302	1,270
Institutional support	16,639	17,135	17,048	17,631	17,701	17,988	18,532	18,461	19,323
Other outside support, total	3,186	3,092	3,251	3,062	3,144	3,432	3,479	3,507	3,759
All other U.S.	2,062	2,079	2,322	2,131	2,269	2,596	2,670	2,783	3,023
Foreign	1,124	1,013	929	931	875	836	809	724	736
Self-support	6,742	6,547	6,111	6,065	5,812	5,578	5,364	5,014	5,346
Psychology									
Total, all sources	26,693	26,102	25,751	26,469	27,308	28,366	29,608	30,694	32,382
Federal, total	2,141	2,061	2,048	2,031	2,049	2,170	2,215	2,491	2,682
Dept of Defense	174	157	140	158	177	153	117	156	163
Dept of HHS, total	1,024	1,043	1,053	947	1,006	1,124	1,183	1,281	1,352
NIH	600	647	619	586	627	763	720	795	899
Other HHS	424	396	434	361	379	361	463	486	453
NSF	190	206	235	231	246	233	236	262	269
USDA	NA	NA	13	9	18	25	29	34	32
All other Federal	753	655	607	686	602	635	650	758	866
Institutional support	9,824	10,251	10,509	10,941	10,776	11,288	11,764	11,997	12,425
Other outside support, total	1,352	1,379	1,378	1,414	1,281	1,059	1,126	1,097	1,075
All other U.S.	1,281	1,310	1,321	1,344	1,219	995	1,071	1,039	1,020
Foreign	71	69	57	70	62	64	55	58	55
Self-support	13,376	12,411	11,816	12,083	13,202	13,849	14,503	15,109	16,200
Social sciences									
Total, all sources	43,609	42,659	42,997	42,907	43,550	43,853	45,401	47,651	50,763
Federal, total	3,195	2,948	2,931	2,650	2,608	2,673	2,790	2,896	3,129
Dept of Defense	323	333	202	148	151	167	174	178	227
Dept of HHS, total	351	322	321	304	323	318	313	313	375
NIH	212	211	197	202	208	207	201	209	268
Other HHS	139	111	124	102	115	111	112	104	107
NSF	339	301	336	365	364	382	423	460	552
USDA	NA	NA	389	317	335	297	321	325	368
All other Federal	2,182	1,992	1,683	1,516	1,435	1,509	1,559	1,620	1,607
Institutional support	18,255	18,614	18,712	19,211	20,148	21,088	21,988	22,962	24,025
Other outside support, total	4,077	3,496	3,365	3,447	3,474	3,252	3,259	2,974	3,179
All other U.S.	1,772	1,586	1,617	1,703	1,856	1,689	1,788	1,588	1,745
Foreign	2,305	1,910	1,748	1,744	1,618	1,563	1,471	1,386	1,434
Self-support	18,082	17,601	17,989	17,599	17,320	16,840	17,364	18,819	20,430

See explanatory information, if any, and SOURCE(S) at end of table.

Table 10. Full-time science and engineering graduate students in all institutions, by field and source of major support: 1983-91

Field and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Engineering, total									
Total, all sources	53,931	55,157	55,938	60,227	61,885	63,187	64,546	65,692	71,230
Federal, total	11,970	11,584	11,260	12,377	13,105	14,020	14,258	14,650	16,060
Dept of Defense	4,014	3,808	3,774	4,115	4,585	4,970	4,808	4,673	4,874
Dept of HHS, total	575	544	524	536	622	628	729	788	842
NIH	477	466	455	449	508	555	644	685	751
Other HHS	98	78	69	87	114	73	85	103	91
NSF	2,680	2,696	2,686	3,128	3,474	3,808	3,766	3,868	4,274
USDA	NA	NA	164	194	256	197	210	225	280
All other Federal	4,701	4,536	4,112	4,404	4,168	4,417	4,745	5,096	5,790
Institutional support	16,315	17,397	18,407	20,239	21,366	21,565	22,802	23,050	24,715
Other outside support, total	8,193	8,735	9,648	10,201	9,712	10,072	10,039	10,279	10,618
All other U.S.	5,761	6,484	7,437	8,000	7,667	8,055	8,009	8,295	8,538
Foreign	2,432	2,251	2,211	2,201	2,045	2,017	2,030	1,984	2,080
Self-support	17,453	17,441	16,623	17,410	17,702	17,530	17,447	17,713	19,837
Chemical engineering									
Total, all sources	5,869	5,734	5,546	5,594	5,620	5,359	5,282	5,387	5,788
Federal, total	1,361	1,315	1,289	1,394	1,486	1,452	1,459	1,513	1,598
Dept of Defense	99	92	90	101	150	145	130	96	134
Dept of HHS, total	53	67	53	69	71	83	87	121	132
NIH	41	60	52	67	63	79	87	119	128
Other HHS	12	7	1	2	8	4	0	2	4
NSF	602	606	622	652	686	683	654	674	664
USDA	NA	NA	9	6	24	7	13	27	16
All other Federal	607	550	515	566	555	534	575	595	652
Institutional support	2,056	2,038	2,022	2,048	2,038	2,021	1,976	2,087	2,269
Other outside support, total	1,255	1,347	1,342	1,301	1,308	1,279	1,278	1,219	1,241
All other U.S.	1,058	1,194	1,193	1,172	1,180	1,166	1,184	1,122	1,124
Foreign	197	153	149	129	128	113	94	97	117
Self-support	1,197	1,034	893	851	788	607	569	568	680
Civil engineering									
Total, all sources	9,807	10,089	9,760	9,982	9,651	9,957	9,974	10,074	11,214
Federal, total	1,333	1,349	1,304	1,370	1,432	1,512	1,403	1,461	1,750
Dept of Defense	166	224	256	250	277	327	280	235	273
Dept of HHS, total	26	8	18	28	12	5	18	15	35
NIH	16	8	9	18	8	3	16	11	31
Other HHS	10	0	9	10	4	2	2	4	4
NSF	371	371	356	390	462	420	382	428	496
USDA	NA	NA	6	23	37	37	33	36	51
All other Federal	770	746	668	679	644	723	690	747	895
Institutional support	2,861	2,987	3,155	3,552	3,602	3,850	3,910	3,886	4,217
Other outside support, total	1,338	1,356	1,311	1,248	1,085	1,108	1,200	1,241	1,338
All other U.S.	813	874	875	808	695	695	723	816	917
Foreign	525	482	436	440	390	413	477	425	421
Self-support	4,275	4,397	3,990	3,812	3,532	3,487	3,461	3,486	3,909
Electrical engineering									
Total, all sources	13,203	13,857	14,752	16,222	17,040	17,653	18,396	18,567	19,988
Federal, total	2,961	2,757	2,391	2,794	3,051	3,499	3,520	3,620	3,957
Dept of Defense	1,704	1,556	1,298	1,415	1,582	1,665	1,648	1,616	1,621
Dept of HHS, total	103	95	81	80	88	124	93	111	119
NIH	77	75	62	57	56	99	73	85	106
Other HHS	26	20	19	23	32	25	20	26	13
NSF	639	598	556	757	848	1,140	1,085	1,132	1,284
USDA	NA	NA	5	4	15	17	20	22	24
All other Federal	515	508	451	538	518	553	674	739	909
Institutional support	3,900	4,355	4,933	5,175	5,563	5,648	6,310	6,245	6,624
Other outside support, total	1,962	2,249	2,431	3,155	2,760	2,807	2,856	2,910	3,010
All other U.S.	1,466	1,716	1,848	2,533	2,183	2,361	2,366	2,400	2,456
Foreign	496	533	583	622	577	446	490	510	554
Self-support	4,380	4,496	4,997	5,098	5,666	5,699	5,710	5,792	6,397
Industrial engineering									
Total, all sources	3,322	3,433	3,517	3,875	4,233	4,398	4,761	4,863	5,705
Federal, total	422	411	395	377	470	561	591	622	716
Dept of Defense	144	133	187	148	213	284	289	311	293
Dept of HHS, total	50	49	45	45	44	39	59	60	52
NIH	31	25	30	14	23	22	25	27	16
Other HHS	19	24	15	31	21	17	34	33	36
NSF	40	55	41	79	97	115	126	129	189
USDA	NA	NA	1	1	1	2	0	1	5
All other Federal	188	174	121	104	115	121	117	121	177
Institutional support	1,055	1,142	1,229	1,342	1,508	1,486	1,667	1,699	1,899
Other outside support, total	328	380	425	449	452	506	537	558	486
All other U.S.	174	264	315	360	370	394	388	400	362
Foreign	154	116	110	89	82	112	149	158	124
Self-support	1,517	1,500	1,468	1,707	1,803	1,845	1,966	1,984	2,604

See explanatory information, if any, and SOURCE(S) at end of table.

Table 10. Full-time science and engineering graduate students in all institutions, by field and source of major support: 1983-91

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Field and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Mechanical engineering									
Total, all sources	8,330	8,698	8,875	9,789	10,164	10,426	10,464	10,662	11,654
Federal, total	1,564	1,650	1,907	2,048	2,264	2,435	2,485	2,522	2,767
Dept of Defense	393	382	540	633	770	819	840	751	775
Dept of HHS, total	73	64	89	61	84	70	61	69	71
NIH	65	58	72	52	67	65	54	68	58
Other HHS	8	6	17	9	17	5	7	1	13
NSF	352	391	439	477	591	661	632	634	732
USDA	NA	NA	19	10	15	16	28	26	29
All other Federal	746	813	820	867	804	869	924	1,042	1,160
Institutional support	2,869	3,126	3,133	3,683	3,841	3,783	3,854	3,919	4,254
Other outside support, total	1,184	1,273	1,607	1,504	1,488	1,536	1,542	1,583	1,686
All other U.S.	872	957	1,354	1,249	1,272	1,303	1,327	1,367	1,415
Foreign	312	316	253	255	216	233	215	216	271
Self-support	2,713	2,649	2,228	2,554	2,571	2,672	2,583	2,638	2,947
Other engineering									
Total, all sources	13,400	13,346	13,488	14,765	15,177	15,394	15,669	16,139	16,881
Federal, total	4,329	4,102	3,974	4,394	4,402	4,561	4,800	4,912	5,272
Dept of Defense	1,508	1,421	1,403	1,568	1,593	1,730	1,621	1,664	1,778
Dept of HHS, total	270	261	238	253	323	307	411	412	433
NIH	247	240	230	241	291	287	389	375	412
Other HHS	23	21	8	12	32	20	22	37	21
NSF	676	675	672	773	790	789	887	871	909
USDA	NA	NA	124	150	164	118	116	113	155
All other Federal	1,875	1,745	1,537	1,650	1,532	1,617	1,765	1,852	1,997
Institutional support	3,574	3,749	3,935	4,439	4,814	4,777	5,085	5,214	5,452
Other outside support, total	2,126	2,130	2,532	2,544	2,619	2,836	2,626	2,768	2,857
All other U.S.	1,378	1,479	1,852	1,878	1,967	2,136	2,021	2,190	2,264
Foreign	748	651	680	666	652	700	605	578	593
Self-support	3,371	3,365	3,047	3,388	3,342	3,220	3,158	3,245	3,300
Total, health fields									
Total, all sources	22,908	23,145	23,177	23,430	23,864	24,445	25,771	25,464	30,771
Federal, total	5,769	5,860	6,022	5,998	6,203	6,210	6,306	5,752	7,244
Dept of Defense	260	278	280	233	239	244	435	365	505
Dept of HHS, total	4,248	4,213	4,425	4,443	4,465	4,535	4,329	3,912	5,108
NIH	1,217	1,047	1,083	1,173	1,485	1,410	1,533	1,586	1,913
Other HHS	3,031	3,166	3,342	3,270	2,980	3,125	2,796	2,326	3,195
NSF	30	42	41	43	49	48	47	46	57
USDA	NA	NA	24	42	48	31	46	58	60
All other Federal	1,231	1,327	1,252	1,237	1,402	1,352	1,449	1,371	1,514
Institutional support	5,010	5,448	5,672	5,920	5,958	6,279	6,886	6,822	7,711
Other outside support, total	1,628	1,647	1,660	1,585	1,524	1,290	1,438	1,324	1,573
All other U.S.	1,137	1,143	1,129	1,053	1,009	888	942	855	1,113
Foreign	491	504	531	532	515	402	496	469	460
Self-support	10,501	10,190	9,823	9,927	10,179	10,666	11,141	11,566	14,243

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: NA = Not available

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 11. Full-time science and engineering graduate students in all institutions, by type and source of major support: 1983-91

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Type and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all types									
Total, all sources	252,846	254,735	258,241	267,075	271,772	276,225	283,849	288,981	308,669
Federal, total	47,829	47,842	48,902	51,318	53,315	55,440	57,370	57,875	63,444
Dept of Defense	7,010	7,151	7,332	7,943	8,796	9,513	9,190	8,738	9,195
Dept of HHS, total	14,985	15,113	15,634	16,271	17,040	17,876	18,446	18,279	20,594
NIH	10,840	11,000	11,128	11,895	12,903	13,753	14,473	14,731	16,033
Other HHS	4,145	4,113	4,506	4,376	4,137	4,123	3,973	3,548	4,561
NSF	9,523	9,850	10,181	10,832	11,261	11,632	11,894	11,949	12,626
USDA	NA	NA	2,180	2,347	2,696	2,607	2,745	2,719	3,065
All other Federal	16,311	15,728	13,575	13,925	13,542	13,812	15,095	16,190	17,964
Institutional support	98,320	102,379	104,396	109,447	112,430	115,178	119,638	121,083	126,136
Other outside support, total	24,926	24,876	26,612	26,767	25,466	25,758	25,863	25,659	27,064
All other U.S.	15,949	16,697	18,814	19,080	18,329	18,817	19,187	19,266	20,416
Foreign	8,977	8,179	7,798	7,687	7,137	6,941	6,676	6,393	6,648
Self-support	81,771	79,638	78,331	79,543	80,561	79,849	80,978	84,364	92,025
Fellowships									
Total, all sources	21,394	21,675	22,672	23,038	22,109	22,638	23,705	24,719	27,188
Federal, total	4,125	4,128	4,422	4,591	4,437	4,572	5,196	6,240	7,517
Dept of Defense	256	240	263	294	349	360	420	565	694
Dept of HHS, total	776	793	874	826	855	866	916	1,005	1,148
NIH	574	613	634	654	693	702	700	827	950
Other HHS	202	180	240	172	162	164	216	178	198
NSF	1,307	1,340	1,398	1,512	1,489	1,587	1,780	2,085	2,246
USDA	NA	NA	150	166	151	95	106	110	102
All other Federal	1,786	1,755	1,737	1,793	1,593	1,664	1,974	2,475	3,327
Institutional support	9,827	10,347	11,234	11,685	11,589	12,073	12,576	12,763	13,557
Other outside support, total	7,442	7,200	7,016	6,762	6,083	5,993	5,933	5,716	6,114
All other U.S.	3,821	4,013	4,155	4,025	3,692	3,450	3,586	3,575	3,798
Foreign	3,621	3,187	2,861	2,737	2,391	2,543	2,347	2,141	2,316
Self-support	0	0	0	0	0	0	0	0	0
Traineeships									
Total, all sources	13,574	13,491	13,469	13,439	13,792	14,238	14,189	14,005	15,560
Federal, total	9,154	8,989	8,755	8,601	8,713	8,588	8,457	8,300	9,807
Dept of Defense	84	62	49	79	137	133	118	105	148
Dept of HHS, total	7,691	7,513	7,399	7,274	7,199	7,176	6,820	6,647	7,893
NIH	4,483	4,295	4,090	3,945	4,232	4,120	4,096	4,384	4,829
Other HHS	3,208	3,218	3,309	3,329	2,967	3,056	2,724	2,263	3,064
NSF	61	49	56	27	83	68	84	63	98
USDA	NA	NA	71	57	87	44	49	57	33
All other Federal	1,318	1,365	1,180	1,164	1,207	1,167	1,386	1,428	1,635
Institutional support	3,316	3,511	3,720	3,885	4,173	4,685	4,811	4,904	4,937
Other outside support, total	1,104	991	994	953	906	965	921	801	816
All other U.S.	740	718	696	733	650	723	645	563	633
Foreign	364	273	298	220	256	242	276	238	183
Self-support	0	0	0	0	0	0	0	0	0
Research assistantships									
Total, all sources	54,923	57,771	61,040	66,071	70,221	74,568	79,116	79,595	84,901
Federal, total	29,144	29,457	30,432	32,747	34,966	36,741	38,552	38,022	40,609
Dept of Defense	3,934	4,081	4,195	4,646	5,617	5,995	5,879	5,330	5,458
Dept of HHS, total	5,989	6,335	6,860	7,676	8,412	9,318	10,227	10,138	11,000
NIH	5,440	5,752	6,107	6,967	7,587	8,537	9,297	9,150	9,869
Other HHS	549	583	753	709	825	781	930	988	1,131
NSF	8,066	8,285	8,559	9,089	9,480	9,820	9,869	9,637	10,089
USDA	NA	NA	1,826	1,971	2,336	2,316	2,465	2,425	2,802
All other Federal	11,155	10,756	8,992	9,365	9,121	9,292	10,112	10,492	11,260
Institutional support	17,949	19,701	20,417	23,046	25,043	26,571	28,826	29,583	31,433
Other outside support, total	7,830	8,613	10,191	10,278	10,212	11,256	11,738	11,990	12,859
All other U.S.	7,270	8,014	9,641	9,690	9,617	10,638	11,061	11,266	12,034
Foreign	560	599	550	588	595	618	677	724	825
Self-support	0	0	0	0	0	0	0	0	0
Teaching assistantships									
Total, all sources	60,138	61,344	61,928	62,640	62,932	63,240	64,544	64,194	65,538
Federal, total	501	403	562	496	439	502	486	605	554
Dept of Defense	0	0	0	0	0	0	0	0	0
Dept of HHS, total	112	71	98	110	151	141	139	116	114
NIH	75	42	59	82	123	117	129	97	90
Other HHS	37	29	39	28	28	24	10	19	24
NSF	25	28	43	75	27	58	66	86	110
USDA	NA	NA	40	33	17	44	33	44	33
All other Federal	364	304	381	278	244	259	248	359	297
Institutional support	59,246	60,504	60,844	61,616	62,012	62,251	63,504	63,077	64,401
Other outside support, total	391	437	522	528	481	487	554	512	583
All other U.S.	391	437	522	528	481	487	554	512	583
Foreign	0	0	0	0	0	0	0	0	0
Self-support	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 11. Full-time science and engineering graduate students in all institutions, by type and source of major support: 1983-91

Type and source of major support	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Other types of support									
Total, all sources	102,817	100,454	99,132	101,887	102,718	101,541	102,295	106,468	115,482
Federal, total	4,905	4,865	4,731	4,883	4,760	5,037	4,679	4,708	4,957
Dept of Defense	2,736	2,768	2,825	2,924	2,693	3,025	2,773	2,738	2,895
Dept of HHS, total	417	401	403	385	423	375	344	373	439
NIH	268	298	238	247	268	277	251	273	295
Other HHS	149	103	165	138	155	98	93	100	144
NSF	64	148	125	129	162	99	95	78	83
USDA	NA	NA	93	120	105	108	92	83	95
All other Federal	1,688	1,548	1,285	1,325	1,377	1,430	1,375	1,436	1,445
Institutional support	7,982	8,316	8,181	9,215	9,613	9,598	9,921	10,756	11,808
Other outside support, total	8,159	7,635	7,889	8,246	7,784	7,057	6,717	6,640	6,692
All other U.S.	3,727	3,515	3,800	4,104	3,889	3,519	3,341	3,350	3,368
Foreign	4,432	4,120	4,089	4,142	3,895	3,538	3,376	3,290	3,324
Self-support	81,771	79,638	78,331	79,543	80,561	79,849	80,978	84,364	92,025

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: NA = Not available

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 12. Full-time science and engineering graduate students with U.S. citizenship in all institutions, by field: 1983-91

Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	190,810	191,150	189,898	191,881	192,930	192,500	196,844	198,742	213,354
Total, science/engineering fields	170,311	170,363	169,263	171,153	171,830	171,140	174,393	176,730	186,415
Engineering, total	31,170	31,959	31,841	33,244	33,893	33,610	34,153	34,396	37,350
Aerospace	1,088	1,115	1,258	1,343	1,559	1,502	1,757	1,870	2,190
Agricultural	425	446	414	457	478	406	361	332	356
Biomedical	836	901	935	1,014	1,016	1,024	1,035	1,193	1,255
Chemical	3,630	3,603	3,337	3,412	3,345	2,967	2,677	2,660	2,821
Civil	5,545	5,688	5,290	5,311	5,104	5,215	5,104	5,337	6,064
Electrical	7,363	7,861	8,113	8,523	8,959	9,264	9,683	9,609	10,136
Engineering science	861	788	795	854	782	803	702	740	774
Industrial	1,957	1,963	1,899	2,079	2,174	2,274	2,467	2,439	2,827
Mechanical	4,327	4,591	4,858	5,218	5,518	5,305	5,617	5,680	6,099
Metallurgical/materials	1,530	1,663	1,805	1,854	1,829	1,804	1,887	2,021	2,083
Mining	273	283	256	250	239	196	153	139	125
Nuclear	591	606	600	614	594	644	628	577	590
Petroleum	330	327	327	305	326	237	207	150	120
Engineering, n.e.c.	2,414	2,124	1,954	2,010	1,970	1,969	1,875	1,649	1,910
Sciences, total	139,141	138,404	137,422	137,909	137,937	137,530	140,240	142,334	149,065
Physical sciences	17,973	18,250	18,186	18,266	18,386	18,090	18,068	17,523	18,234
Astronomy	480	479	485	494	509	545	604	603	598
Chemistry	11,498	11,488	11,485	11,484	11,295	10,764	10,547	10,017	10,349
Physics	5,911	6,136	6,072	6,157	6,410	6,674	6,815	6,803	7,181
Physical sciences, n.e.c.	84	147	144	131	172	107	102	100	106
Earth, atmospheric, and ocean sciences	10,374	10,241	9,767	9,450	8,575	8,119	7,818	7,842	7,854
Atmospheric sciences	603	612	676	649	605	598	575	564	570
Geosciences	7,280	7,194	6,758	6,365	5,565	5,115	4,706	4,445	4,296
Oceanography	1,235	1,302	1,250	1,304	1,295	1,192	1,277	1,339	1,359
Earth, atmos., and ocean sci., n.e.c.	1,256	1,133	1,083	1,132	1,110	1,214	1,260	1,494	1,629
Mathematical sciences	6,715	6,773	7,000	7,245	7,550	7,740	7,710	7,941	8,376
Computer sciences	6,724	7,052	8,551	9,176	9,087	8,635	8,788	8,887	8,559
Agricultural sciences	7,429	7,400	6,821	6,728	6,415	6,411	6,350	6,177	6,360
Biological sciences	31,382	31,468	30,826	30,752	30,497	30,504	30,641	29,994	31,387
Anatomy	847	878	800	772	771	793	784	705	716
Biochemistry	3,203	3,389	3,489	3,545	3,400	3,413	3,311	3,186	3,245
Biology	8,045	7,864	7,437	7,307	7,302	7,339	7,606	7,415	7,738
Biometry/epidemiology	720	628	823	826	920	933	930	907	1,000
Biophysics	357	339	288	329	343	365	402	398	414
Botany	2,333	2,275	2,126	2,052	1,858	1,718	1,635	1,434	1,454
Cell biology	1,010	1,062	1,217	1,380	1,553	1,618	1,700	1,860	2,093
Ecology	766	790	776	757	686	713	745	739	786
Entomology/parasitology	1,065	1,040	904	855	767	775	718	699	679
Genetics	819	852	891	966	964	923	954	951	1,108
Microbiology	3,192	3,281	3,226	3,146	3,209	3,357	3,259	3,163	3,214
Nutrition	2,167	2,127	2,115	2,150	2,047	1,902	1,876	1,844	1,852
Pathology	851	902	839	852	848	863	858	829	824
Pharmacology	1,698	1,685	1,743	1,640	1,548	1,550	1,630	1,611	1,676
Physiology	1,554	1,714	1,721	1,687	1,646	1,561	1,507	1,535	1,525
Zoology	1,910	1,719	1,540	1,532	1,564	1,458	1,505	1,354	1,470
Biosciences, n.e.c.	845	923	891	956	1,071	1,223	1,221	1,364	1,593
Psychology	25,600	25,057	24,590	25,299	26,114	27,037	28,263	29,212	30,762
Social sciences	32,944	32,163	31,681	30,993	31,313	30,994	32,602	34,758	37,533
Agricultural economics	1,282	1,263	1,222	1,205	1,118	1,037	996	1,031	1,042
Anthropology	3,538	3,582	3,471	3,525	3,520	3,625	3,756	4,091	4,321
Economics (except agricultural)	5,602	5,207	4,942	4,876	4,750	4,545	4,587	4,615	4,988
Geography	1,816	1,803	1,764	1,724	1,865	1,808	1,932	1,951	2,159
History and philosophy of science	189	201	176	198	226	221	258	296	284
Linguistics	1,525	1,481	1,394	1,397	1,497	1,525	1,453	1,481	1,540
Political science	10,703	10,238	10,569	10,462	10,104	10,324	11,313	12,001	13,312
Sociology	3,693	3,676	3,439	3,332	3,691	3,659	3,892	4,285	4,549
Sociology/anthropology	542	484	437	460	434	442	499	630	566
Social sciences, n.e.c.	4,054	4,228	4,267	3,814	4,108	3,808	3,916	4,377	4,772
Total, health fields	20,499	20,787	20,635	20,728	21,100	21,360	22,451	22,012	26,939
Dentistry	579	640	590	639	756	767	680	628	663
Neurology	231	284	300	324	406	493	599	637	804
Nursing	6,045	5,941	5,461	5,476	5,496	5,331	5,167	3,740	6,240
Pharmaceutical sciences	1,139	1,126	1,142	1,145	1,131	1,093	1,206	1,117	1,272
Preventive medicine/community health	3,243	3,293	3,334	3,272	3,318	3,351	3,336	3,529	3,493
Speech pathology/audiology	5,013	5,057	5,224	5,141	4,766	4,973	5,357	5,458	6,320
Veterinary sciences	252	315	382	368	439	445	479	508	494
Clinical medicine, n.e.c.	906	912	956	932	966	1,011	1,122	1,103	1,302
Health related, n.e.c.	3,091	3,219	3,246	3,431	3,822	3,896	4,505	5,292	6,351

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 13. Full-time science and engineering graduate students without U.S. citizenship in all institutions, by field: 1983-91

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Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	62,036	63,585	68,343	75,194	78,842	83,725	87,005	90,239	95,315
Total, science/engineering fields	59,627	61,227	65,801	72,492	76,078	80,640	83,685	86,787	91,483
Engineering, total	22,761	23,198	24,097	26,983	27,992	29,577	30,393	31,296	33,880
Aerospace	752	739	736	811	813	1,031	1,015	1,140	1,126
Agricultural	341	327	353	426	446	473	490	461	469
Biomedical	195	220	194	280	376	431	576	588	666
Chemical	2,239	2,131	2,209	2,182	2,275	2,392	2,605	2,727	2,967
Civil	4,262	4,401	4,470	4,671	4,547	4,742	4,870	4,737	5,150
Electrical	5,840	5,996	6,639	7,699	8,081	8,389	8,713	8,958	9,852
Engineering science	495	484	469	591	591	615	557	503	590
Industrial	1,365	1,470	1,618	1,796	2,059	2,124	2,294	2,424	2,878
Mechanical	4,003	4,107	4,017	4,571	4,646	5,121	4,847	4,982	5,553
Metallurgical/materials	1,174	1,209	1,288	1,516	1,607	1,660	1,828	1,901	1,976
Mining	155	141	135	192	196	219	185	195	211
Nuclear	461	412	430	445	450	461	484	503	490
Petroleum	290	287	250	267	318	362	299	316	401
Engineering, n.e.c.	1,189	1,274	1,289	1,538	1,587	1,557	1,630	1,861	1,551
Sciences, total	36,866	38,029	41,704	45,509	48,086	51,063	53,292	55,491	57,603
Physical sciences	7,232	7,602	8,483	9,498	10,028	10,484	11,139	11,519	11,897
Astronomy	105	117	150	160	172	160	158	187	212
Chemistry	3,525	3,635	4,095	4,513	4,940	5,324	5,725	6,015	6,347
Physics	3,584	3,828	4,215	4,800	4,894	4,964	5,225	5,285	5,301
Physical sciences, n.e.c.	18	22	23	25	22	36	31	32	37
Earth, atmospheric, and ocean sciences	1,694	1,596	1,691	1,897	1,968	2,180	2,325	2,431	2,560
Atmospheric sciences	182	164	196	206	219	231	235	264	289
Geosciences	923	899	945	1,019	1,101	1,195	1,279	1,360	1,395
Oceanography	377	297	312	390	356	437	522	512	539
Earth, atmos., and ocean sci., n.e.c.	212	236	238	282	292	317	289	295	337
Mathematical sciences	4,242	4,538	4,818	5,145	5,494	5,774	5,985	5,893	5,883
Computer sciences	3,963	4,535	5,550	6,134	6,485	6,758	7,009	7,972	7,993
Agricultural sciences	2,497	2,451	2,370	2,586	2,648	2,661	2,651	2,875	2,878
Biological sciences	5,480	5,766	6,315	7,165	8,032	9,018	10,039	10,426	11,542
Anatomy	74	58	91	121	153	180	215	202	240
Biochemistry	775	846	974	1,095	1,214	1,330	1,511	1,621	1,722
Biology	956	1,101	1,093	1,250	1,372	1,526	1,712	1,786	1,856
Biometry/epidemiology	157	123	173	222	270	303	306	346	446
Biophysics	80	80	93	120	125	179	208	174	231
Botany	581	588	591	711	738	838	821	780	822
Cell biology	128	147	189	275	333	405	477	499	618
Ecology	78	87	100	100	110	123	134	151	150
Entomology/parasitology	240	224	234	252	295	286	291	298	335
Genetics	145	134	166	205	244	264	300	272	308
Microbiology	512	545	653	725	808	952	1,070	1,126	1,195
Nutrition	821	891	925	905	967	974	998	1,074	1,107
Pathology	205	168	188	203	245	246	291	296	342
Pharmacology	235	241	250	318	379	442	510	543	632
Physiology	212	255	265	318	350	447	550	581	635
Zoology	142	144	178	188	223	261	269	264	314
Biosciences, n.e.c.	139	134	152	157	206	262	376	413	589
Psychology	1,093	1,045	1,161	1,170	1,194	1,329	1,345	1,482	1,620
Social sciences	10,665	10,496	11,316	11,914	12,237	12,859	12,799	12,893	13,230
Agricultural economics	765	764	768	759	739	872	916	930	961
Anthropology	402	386	445	536	566	651	655	696	715
Economics (except agricultural)	3,541	3,564	3,996	4,083	4,235	4,476	4,501	4,601	4,742
Geography	386	372	360	384	425	407	426	429	415
History and philosophy of science	40	42	51	39	41	45	45	44	56
Linguistics	850	838	943	961	952	994	1,012	1,025	1,057
Political science	2,740	2,560	2,602	2,948	2,903	2,953	2,700	2,621	2,814
Sociology	1,101	1,069	1,205	1,240	1,335	1,423	1,377	1,383	1,297
Sociology/anthropology	129	122	128	124	126	124	134	138	121
Social sciences, n.e.c.	711	779	818	840	915	914	1,033	1,026	1,052
Total, health fields	2,409	2,358	2,542	2,702	2,764	3,085	3,320	3,452	3,832
Dentistry	122	132	156	177	145	156	170	184	226
Neurology	27	29	34	48	69	97	112	143	174
Nursing	159	172	152	158	163	177	164	161	252
Pharmaceutical sciences	629	645	647	696	693	814	911	879	1,000
Preventive medicine/community health	718	662	799	811	825	874	879	976	1,007
Speech pathology/audiology	242	208	222	250	228	274	283	280	326
Veterinary sciences	111	110	133	138	153	161	189	201	223
Clinical medicine, n.e.c.	166	118	189	195	205	222	264	299	310
Health related, n.e.c.	235	282	210	229	283	310	348	329	314

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SPS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 14. Part-time science and engineering graduate students in all institutions, by field: 1983-91

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Field	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989	1990	1991
Total, all surveyed fields	139,530	141,714	147,191	149,367	149,669	149,527	151,012	155,365	167,022
Total, science/engineering fields	118,377	119,165	124,490	125,402	125,854	125,041	126,613	131,781	137,342
Engineering, total	37,180	37,623	40,222	41,913	42,004	39,972	39,773	41,637	43,177
Aerospace	465	486	544	650	643	690	682	856	727
Agricultural	203	181	174	173	139	160	180	146	158
Biomedical	213	224	244	255	297	300	308	331	312
Chemical	1,694	1,639	1,604	1,418	1,406	1,259	1,178	1,288	1,339
Civil	5,114	5,114	5,156	5,005	5,067	4,865	4,945	5,380	6,051
Electrical	11,913	12,341	13,274	13,577	14,174	14,184	14,659	15,016	15,284
Engineering science	905	881	834	917	970	968	818	768	790
Industrial	6,051	6,102	7,324	8,013	8,224	7,333	6,697	6,748	7,628
Mechanical	4,581	5,157	5,282	5,924	6,114	5,781	5,775	5,793	6,166
Metallurgical/materials	743	785	850	838	930	871	874	999	1,090
Mining	96	78	98	70	78	74	80	103	153
Nuclear	151	216	190	206	235	198	211	198	202
Petroleum	117	130	205	175	174	143	159	186	190
Engineering, n.e.c.	4,934	4,289	4,443	4,692	3,553	3,146	3,207	3,825	3,087
Sciences, total	81,197	81,542	84,268	83,489	83,850	85,069	86,840	90,144	94,165
Physical sciences	4,251	4,204	4,312	4,484	4,316	4,388	4,412	4,579	4,769
Astronomy	33	43	36	35	41	26	27	20	19
Chemistry	2,773	2,629	2,720	2,740	2,584	2,484	2,540	2,663	2,726
Physics	1,311	1,367	1,385	1,482	1,503	1,670	1,617	1,672	1,739
Physical sciences, n.e.c.	134	165	171	227	188	208	228	224	285
Earth, atmospheric, and ocean sciences	3,522	3,818	4,133	3,863	3,979	3,741	3,706	3,832	4,333
Atmospheric sciences	111	131	92	106	128	111	402	101	109
Geosciences	2,118	2,277	2,591	2,435	2,332	2,155	2,073	1,909	1,937
Oceanography	451	503	519	434	476	404	408	397	395
Earth, atmos., and ocean sci., n.e.c.	842	907	931	888	1,043	1,071	1,123	1,425	1,892
Mathematical sciences	6,423	6,148	5,762	5,577	5,480	5,589	5,643	5,948	5,733
Computer sciences	12,929	14,223	15,743	16,087	16,565	17,161	16,801	17,514	18,176
Agricultural sciences	2,470	2,330	2,308	2,119	2,032	2,022	2,125	2,225	2,237
Biological sciences	8,909	8,658	9,135	8,995	8,609	8,467	8,577	9,063	9,191
Anatomy	116	93	102	80	87	83	79	89	90
Biochemistry	227	227	203	245	209	190	272	214	249
Biology	4,050	3,925	4,191	4,109	3,819	3,692	3,602	3,855	3,892
Biometry/epidemiology	279	253	364	386	420	499	541	670	620
Biophysics	13	14	60	98	123	48	45	27	18
Botany	385	388	471	386	409	380	388	353	385
Cell biology	44	47	23	61	78	55	57	68	93
Ecology	163	211	152	155	167	192	230	287	290
Entomology/parasitology	170	174	204	199	182	179	172	176	157
Genetics	71	73	63	91	106	102	111	108	108
Microbiology	558	500	568	503	438	465	498	500	528
Nutrition	1,363	1,259	1,274	1,266	1,274	1,352	1,385	1,350	1,292
Pathology	393	384	319	328	305	274	267	278	351
Pharmacology	136	124	114	122	150	140	132	143	128
Physiology	228	191	225	215	217	212	149	160	169
Zoology	378	440	417	363	326	315	315	420	408
Biosciences, n.e.c.	335	355	385	388	299	289	334	365	413
Psychology	14,219	14,835	15,422	14,948	15,019	15,788	16,438	17,549	19,210
Social sciences	28,474	27,326	27,453	27,416	27,850	27,913	29,138	29,434	30,516
Agricultural economics	248	252	278	284	346	350	364	312	363
Anthropology	1,704	1,622	1,715	1,744	1,624	1,669	1,717	1,678	1,659
Economics (except agricultural)	3,921	3,736	3,492	3,144	3,035	3,015	3,055	2,970	2,979
Geography	858	860	812	947	933	993	1,153	1,163	1,211
History and philosophy of science	24	31	45	29	27	22	39	29	43
Linguistics	647	841	718	751	833	724	875	933	855
Political science	14,607	13,123	13,841	13,841	14,601	14,607	15,290	15,132	15,803
Sociology	2,126	1,995	1,923	1,882	1,919	1,963	2,089	2,071	2,468
Sociology/anthropology	529	469	469	437	422	425	389	415	341
Social sciences, n.e.c.	3,810	4,397	4,160	4,357	4,110	4,145	4,167	4,731	4,794
Total, health fields	21,153	22,549	22,701	23,965	23,815	24,486	24,399	23,584	29,680
Dentistry	75	82	90	113	148	155	148	129	141
Neurology	3	4	2	10	19	10	21	22	28
Nursing	10,741	11,874	11,470	11,878	11,536	11,620	11,303	10,272	15,797
Pharmaceutical sciences	873	748	764	841	783	706	800	794	880
Preventive medicine/community health	2,718	2,886	3,154	3,147	3,353	3,454	3,474	3,738	4,095
Speech pathology/audiology	2,581	2,480	2,540	2,566	2,408	2,421	2,448	2,697	2,673
Veterinary sciences	103	132	122	124	139	146	133	191	177
Clinical medicine, n.e.c.	553	526	564	543	570	573	410	379	452
Health related, n.e.c.	3,506	3,817	3,995	4,743	4,859	5,401	5,662	5,362	5,437

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 15. Science and engineering graduate students in doctorate-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	341,360	344,655	353,696	364,234	368,358	373,909	379,521	384,911	411,296
Total, science/engineering fields	304,217	306,073	314,928	324,140	328,434	332,738	337,265	343,606	360,723
Engineering, total	84,483	86,236	89,431	94,841	96,214	96,123	96,382	98,355	105,092
Aerospace	2,273	2,308	2,506	2,771	2,980	3,186	3,387	3,775	3,974
Agricultural	969	954	941	1,054	1,063	1,039	1,031	939	983
Biomedical	1,185	1,288	1,317	1,481	1,613	1,676	1,853	2,049	2,185
Chemical	7,352	7,196	7,015	6,891	6,905	6,532	6,361	6,559	7,000
Civil	14,036	14,371	14,089	14,102	13,625	13,896	13,927	14,336	15,985
Electrical	23,448	24,491	26,273	27,731	28,903	29,655	30,107	30,205	31,780
Engineering science	1,981	1,900	1,838	2,128	2,111	2,167	2,058	1,993	2,124
Industrial	8,546	8,655	9,847	10,836	11,454	10,701	10,223	10,119	11,773
Mechanical	12,089	12,966	13,246	14,580	15,064	15,024	14,960	15,102	16,620
Metallurgical/materials	3,338	3,572	3,823	4,077	4,244	4,227	4,469	4,783	4,995
Mining	498	477	463	487	484	450	388	409	475
Nuclear	1,203	1,234	1,220	1,265	1,279	1,303	1,323	1,278	1,282
Petroleum	724	732	752	726	790	711	651	638	700
Engineering, n.e.c.	6,841	6,092	6,101	6,712	5,699	5,556	5,644	6,170	5,216
Sciences, total	219,734	219,837	225,497	229,299	232,220	236,615	240,883	245,251	255,631
Physical sciences	27,747	28,410	29,312	30,543	30,967	31,212	31,806	31,851	32,938
Astronomy	618	639	671	689	722	731	789	810	829
Chemistry	16,548	16,599	17,152	17,602	17,667	17,482	17,713	17,653	18,317
Physics	10,512	10,985	11,297	12,014	12,330	12,787	13,116	13,189	13,576
Physical sciences, n.e.c.	69	187	192	238	248	212	188	199	216
Earth, atmospheric, and ocean sciences	14,327	14,329	14,263	14,036	13,368	12,909	12,702	12,840	13,224
Atmospheric sciences	884	895	951	956	948	929	900	925	956
Geosciences	9,688	9,716	9,533	9,176	8,385	7,904	7,576	7,199	7,068
Oceanography	1,907	1,929	1,984	2,027	2,022	1,926	2,070	2,113	2,173
Earth, atmos., and ocean sci., n.e.c.	1,848	1,789	1,795	1,877	2,013	2,150	2,156	2,603	3,027
Mathematical sciences	14,846	15,029	15,218	15,616	16,122	16,757	16,804	17,113	17,526
Computer sciences	18,306	20,366	23,823	25,176	26,083	26,711	26,481	27,547	27,693
Agricultural sciences	11,644	11,446	10,799	10,779	10,430	10,396	10,443	10,539	10,747
Biological sciences	41,330	41,671	42,201	43,076	43,341	44,353	45,441	45,640	48,093
Anatomy	1,037	1,029	993	973	1,011	1,056	1,078	996	1,046
Biochemistry	4,165	4,432	4,632	4,852	4,778	4,901	5,055	4,987	5,175
Biology	9,507	9,483	9,492	9,717	9,561	9,728	10,016	10,104	10,437
Biometry/epidemiology	1,156	1,004	1,360	1,434	1,610	1,735	1,777	1,923	2,066
Biophysics	450	433	441	547	591	592	655	599	663
Botany	3,254	3,218	3,160	3,101	2,960	2,892	2,806	2,516	2,611
Cell biology	1,182	1,256	1,429	1,716	1,964	2,078	2,234	2,427	2,804
Ecology	962	1,034	978	956	899	963	1,037	1,083	1,125
Entomology/parasitology	1,475	1,438	1,342	1,306	1,244	1,240	1,181	1,173	1,171
Genetics	986	1,012	1,075	1,219	1,273	1,247	1,321	1,287	1,482
Microbiology	4,137	4,229	4,342	4,280	4,360	4,708	4,763	4,727	4,879
Nutrition	4,093	4,023	4,005	3,987	3,976	3,927	3,917	3,961	3,919
Pathology	1,406	1,410	1,299	1,318	1,342	1,326	1,350	1,336	1,446
Pharmacology	2,063	2,045	2,105	2,078	2,076	2,131	2,270	2,297	2,436
Physiology	1,994	2,160	2,211	2,220	2,213	2,220	2,206	2,276	2,329
Zoology	2,390	2,266	2,103	2,065	2,097	2,022	2,075	2,025	2,173
Biosciences, n.e.c.	1,073	1,199	1,234	1,307	1,786	1,587	1,700	1,923	2,331
Psychology	29,925	29,946	30,385	30,519	31,009	32,387	33,392	34,244	36,358
Social sciences	61,609	58,640	59,496	59,554	60,900	61,890	63,814	65,477	69,052
Agricultural economics	2,237	2,212	2,200	2,184	2,152	2,209	2,227	2,232	2,313
Anthropology	5,399	5,371	5,408	5,592	5,483	5,710	5,916	6,215	6,410
Economics (except agricultural)	11,917	11,420	11,319	11,157	11,124	11,203	11,283	11,422	11,906
Geography	2,615	2,577	2,515	2,571	2,671	2,601	2,819	2,868	3,123
History and philosophy of science	253	274	272	266	294	288	342	369	383
Linguistics	2,813	2,920	2,804	2,819	2,920	2,881	2,919	2,955	3,102
Political science	22,216	20,130	21,245	21,607	22,227	22,242	23,165	23,217	25,073
Sociology	6,362	6,110	5,994	5,836	6,308	6,426	6,628	6,877	7,223
Sociology/anthropology	1,014	960	906	904	882	912	946	1,096	953
Social sciences, n.e.c.	6,783	6,666	6,833	6,618	6,839	7,418	7,569	8,226	8,566
Total, health fields	37,143	38,582	38,768	40,094	39,924	41,171	42,256	41,305	50,573
Dentistry	776	854	836	929	1,049	1,078	998	941	1,030
Neurology	247	303	323	372	472	586	723	782	981
Nursing	14,986	15,913	15,069	15,282	14,749	14,478	13,998	11,927	18,640
Pharmaceutical sciences	2,625	2,500	2,533	2,672	2,602	2,609	2,909	2,788	3,151
Preventive medicine/community health	6,492	6,657	7,101	7,043	7,295	7,537	7,550	8,079	8,321
Speech pathology/audiology	5,837	5,772	5,984	6,030	5,442	5,926	6,148	6,275	6,889
Veterinary sciences	440	531	610	607	711	735	782	881	875
Clinical medicine, n.e.c.	1,282	1,293	1,480	1,420	1,503	1,580	1,595	1,615	1,892
Health related, n.e.c.	4,458	4,759	4,832	5,739	6,101	6,642	7,553	8,017	8,794

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 16. Science and engineering graduate students in doctorate-granting institutions, by geographic distribution: 1983-91

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Division and State	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all institutions	341,360	344,655	353,696	364,234	368,358	373,909	379,521	384,911	411,296
New England	26,206	26,165	27,109	27,863	27,556	28,644	28,126	28,179	30,768
Connecticut	3,772	3,648	3,930	4,121	4,317	4,341	4,335	4,266	4,540
Maine	509	580	523	538	614	649	667	689	752
Massachusetts	18,646	18,641	19,313	19,703	19,100	20,048	19,488	19,701	21,669
New Hampshire	794	803	844	878	846	938	955	1,013	1,059
Rhode Island	1,851	1,834	1,883	1,993	2,074	2,018	2,063	1,885	2,100
Vermont	634	659	616	630	605	650	618	625	648
Middle Atlantic	64,189	65,392	66,257	68,132	66,898	67,979	67,307	67,283	70,878
New Jersey	9,132	10,001	10,322	10,377	10,843	11,178	10,726	10,479	10,776
New York	38,229	38,626	38,891	40,250	38,622	39,173	38,703	38,794	40,706
Pennsylvania	16,828	16,765	17,044	17,505	17,433	17,628	17,878	18,010	19,396
East North Central	61,981	61,197	62,036	64,326	66,903	68,020	70,561	71,097	76,207
Illinois	16,344	16,547	17,261	17,829	18,663	18,989	19,542	19,814	20,561
Indiana	8,143	7,439	6,913	7,670	8,037	8,102	8,937	9,356	9,780
Michigan	12,541	12,640	12,804	13,179	13,470	13,501	14,634	14,962	15,621
Ohio	17,392	16,921	17,484	18,017	18,933	19,516	19,335	19,130	21,594
Wisconsin	7,561	7,650	7,574	7,631	7,800	7,912	8,113	7,835	8,651
West North Central	23,323	23,243	23,806	24,298	24,521	24,939	25,179	25,529	27,121
Iowa	4,627	4,517	4,651	4,810	4,818	5,005	4,971	5,303	5,507
Kansas	4,427	4,367	4,225	4,230	4,387	4,501	4,605	4,599	4,880
Minnesota	5,127	5,255	5,641	5,570	5,373	5,534	5,681	5,677	5,840
Missouri	5,655	5,680	5,811	6,224	6,408	6,296	6,204	6,166	6,695
Nebraska	1,752	1,742	1,721	1,676	1,764	1,805	1,856	1,911	2,144
North Dakota	946	906	949	970	915	947	947	886	916
South Dakota	789	776	808	818	856	851	915	987	1,139
South Atlantic	47,881	49,769	52,104	54,724	56,387	57,840	58,847	61,536	65,707
Delaware	1,180	1,112	1,150	1,189	1,303	1,198	1,179	1,148	1,447
District of Columbia	7,703	8,120	8,531	9,110	9,204	8,726	8,219	8,295	8,611
Florida	8,953	9,067	9,961	10,019	10,595	11,625	11,883	12,911	14,173
Georgia	5,683	6,290	6,005	6,386	6,726	6,749	6,902	7,006	7,795
Maryland	5,880	5,961	6,185	6,525	6,503	7,144	7,498	7,758	8,073
North Carolina	7,152	7,238	7,234	7,720	7,799	7,977	8,294	8,505	8,856
South Carolina	2,864	2,925	2,931	3,223	3,313	3,167	3,386	3,434	3,854
Virginia	6,798	7,403	8,492	8,977	9,458	9,666	9,874	10,720	10,994
West Virginia	1,668	1,653	1,615	1,575	1,486	1,588	1,612	1,759	1,904
East South Central	12,401	12,941	13,364	13,929	14,340	15,040	16,275	15,621	17,359
Alabama	3,042	3,382	3,759	4,089	4,472	4,710	5,127	5,044	5,757
Kentucky	2,774	2,837	2,736	2,742	2,885	2,942	3,178	2,900	3,315
Mississippi	2,001	2,200	2,172	2,250	2,255	2,389	2,501	2,366	2,550
Tennessee	4,584	4,522	4,697	4,848	4,728	4,999	5,469	5,311	5,737
West South Central	31,930	32,522	32,231	32,711	32,703	33,052	34,574	35,810	39,255
Arkansas	1,172	1,182	1,181	1,161	1,180	1,053	1,029	1,108	1,495
Louisiana	4,344	4,564	4,548	4,388	4,342	4,241	4,342	4,630	5,323
Oklahoma	3,849	3,813	3,924	3,882	4,196	4,090	4,102	4,393	4,622
Texas	22,565	22,963	22,578	23,280	22,985	23,668	25,101	25,679	27,815
Mountain	22,255	22,080	22,861	23,783	24,422	24,385	24,502	25,587	28,104
Arizona	6,147	6,212	6,743	6,705	6,723	7,012	7,167	7,355	7,648
Colorado	6,384	6,105	6,190	7,056	7,399	7,278	7,000	7,707	8,693
Idaho	1,004	1,008	1,041	1,035	1,173	1,225	1,348	1,510	1,512
Montana	1,019	1,030	980	911	891	941	971	957	1,046
Nevada	532	561	557	515	619	656	721	841	871
New Mexico	2,551	2,464	2,551	2,647	2,815	2,760	2,765	2,802	3,019
Utah	3,783	3,921	3,986	4,154	4,043	3,796	3,728	3,700	4,286
Wyoming	835	779	813	760	759	717	802	715	1,029
Pacific	48,934	48,910	51,376	51,948	52,387	51,779	51,853	51,863	53,068
Alaska	424	352	381	399	387	404	444	487	480
California	38,410	38,100	40,401	40,830	41,278	40,489	40,684	40,188	40,615
Hawaii	1,782	1,702	1,705	1,820	1,822	1,829	1,857	1,981	2,092
Oregon	3,093	3,234	3,262	3,429	3,454	3,580	3,549	3,646	4,074
Washington	5,225	5,522	5,627	5,470	5,446	5,477	5,319	5,561	5,807
Outlying areas	2,260	2,436	2,552	2,520	2,241	2,231	2,297	2,406	2,829

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 17. Full-time science and engineering graduate students in doctorate-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	235,166	236,554	240,386	249,098	253,187	258,318	265,188	268,864	286,756
Total, science/engineering fields	214,768	215,923	219,726	228,225	232,019	236,395	241,996	246,012	259,484
Engineering, total	52,294	53,592	54,462	58,532	60,043	61,266	62,363	63,378	68,925
Aerospace	1,825	1,840	1,980	2,138	2,355	2,517	2,742	2,946	3,247
Agricultural	766	773	767	881	924	879	851	793	825
Biomedical	1,012	1,106	1,117	1,280	1,352	1,402	1,572	1,744	1,896
Chemical	5,790	5,656	5,494	5,542	5,578	5,330	5,245	5,354	5,733
Civil	9,533	9,853	9,518	9,704	9,380	9,629	9,643	9,793	10,836
Electrical	12,854	13,461	14,358	15,732	16,457	17,012	17,597	17,756	19,181
Engineering science	1,339	1,256	1,246	1,427	1,356	1,405	1,249	1,232	1,357
Industrial	3,130	3,271	3,342	3,704	4,045	4,176	4,492	4,476	5,422
Mechanical	8,178	8,511	8,683	9,587	9,955	10,186	10,185	10,337	11,371
Metallurgical/materials	2,686	2,863	3,075	3,340	3,409	3,441	3,687	3,898	4,034
Mining	404	403	371	419	406	379	312	306	325
Nuclear	1,052	1,018	1,030	1,059	1,044	1,105	1,112	1,080	1,080
Petroleum	607	602	551	551	619	570	494	457	514
Engineering, n.e.c.	3,118	2,979	2,930	3,168	3,163	3,235	3,182	3,206	3,104
Sciences, total	162,474	162,331	165,264	169,693	171,976	175,129	179,633	182,634	190,559
Physical sciences	24,502	25,147	25,938	27,069	27,652	27,778	28,428	28,344	29,364
Astronomy	585	596	635	654	681	705	762	790	810
Chemistry	14,495	14,615	15,067	15,537	15,735	15,582	15,810	15,645	16,289
Physics	9,361	9,800	10,103	10,753	11,078	11,373	11,761	11,812	12,158
Physical sciences, n.e.c.	61	136	133	125	158	118	95	97	107
Earth, atmospheric, and ocean sciences	11,516	11,284	10,890	10,886	10,097	9,844	9,721	9,830	9,880
Atmospheric sciences	778	770	867	854	822	825	803	828	857
Geosciences	7,908	7,797	7,350	7,110	6,411	6,060	5,788	5,575	5,472
Oceanography	1,547	1,518	1,520	1,652	1,603	1,576	1,745	1,796	1,834
Earth, atmos., and ocean sci., n.e.c.	1,283	1,199	1,153	1,270	1,261	1,383	1,385	1,631	1,717
Mathematical sciences	10,314	10,609	11,145	11,723	12,341	12,800	13,004	13,154	13,525
Computer sciences	9,276	10,108	12,374	13,389	13,639	13,695	14,063	14,689	14,583
Agricultural sciences	9,510	9,424	8,815	8,937	8,691	8,674	8,613	8,643	8,793
Biological sciences	34,987	35,442	35,479	36,363	36,959	37,993	39,133	38,901	41,282
Anatomy	921	936	891	893	924	973	999	907	956
Biochemistry	3,952	4,217	4,446	4,625	4,600	4,734	4,806	4,792	4,953
Biology	7,484	7,504	7,176	7,322	7,429	7,637	8,093	7,995	8,293
Biometry/epidemiology	877	751	996	1,048	1,190	1,236	1,236	1,253	1,446
Biophysics	437	419	381	449	468	544	610	572	645
Botany	2,884	2,839	2,695	2,724	2,556	2,520	2,423	2,171	2,229
Cell biology	1,138	1,209	1,406	1,655	1,886	2,023	2,177	2,359	2,711
Ecology	835	865	864	844	784	822	872	884	925
Entomology/parasitology	1,305	1,264	1,138	1,107	1,062	1,061	1,009	997	1,014
Genetics	919	942	1,014	1,129	1,167	1,146	1,211	1,181	1,375
Microbiology	3,680	3,803	3,867	3,853	3,998	4,296	4,320	4,275	4,400
Nutrition	2,882	2,895	2,916	2,928	2,892	2,758	2,737	2,820	2,857
Pathology	1,051	1,064	1,020	1,050	1,078	1,100	1,134	1,097	1,138
Pharmacology	1,931	1,925	1,993	1,958	1,927	1,992	2,140	2,154	2,308
Physiology	1,766	1,969	1,986	2,005	1,996	2,008	2,057	2,116	2,160
Zoology	2,025	1,844	1,699	1,708	1,775	1,708	1,766	1,612	1,765
Biosciences, n.e.c.	900	996	991	1,065	1,227	1,435	1,543	1,716	2,107
Psychology	22,122	21,572	21,291	21,897	22,375	23,314	24,240	24,655	26,052
Social sciences	40,247	38,745	39,332	39,429	40,222	41,031	42,431	44,418	47,080
Agricultural economics	1,994	1,975	1,946	1,915	1,823	1,878	1,885	1,934	1,968
Anthropology	3,866	3,900	3,805	4,006	4,015	4,199	4,336	4,704	4,928
Economics (except agricultural)	8,787	8,425	8,577	8,624	8,665	8,736	8,798	8,943	9,414
Geography	2,012	1,983	1,939	1,931	2,050	1,955	2,100	2,151	2,332
History and philosophy of science	229	243	227	237	267	266	303	340	340
Linguistics	2,316	2,264	2,303	2,307	2,388	2,438	2,389	2,456	2,546
Political science	11,798	11,024	11,528	11,805	11,611	11,866	12,503	12,934	14,250
Sociology	4,557	4,417	4,355	4,313	4,736	4,820	4,975	5,315	5,447
Sociology/anthropology	596	572	534	550	527	538	607	730	646
Social sciences, n.e.c.	4,092	3,942	4,118	3,741	4,140	4,335	4,535	4,911	5,209
Total, health fields	20,398	20,631	20,660	20,873	21,168	21,923	23,192	22,852	27,272
Dentistry	701	772	746	816	901	923	850	812	889
Neurology	244	299	321	369	470	583	708	770	968
Nursing	5,726	5,682	5,140	5,135	5,085	4,829	4,697	3,495	5,588
Pharmaceutical sciences	1,766	1,769	1,787	1,841	1,823	1,906	2,117	1,996	2,272
Preventive medicine/community health	3,926	3,915	4,086	4,036	4,093	4,181	4,180	4,447	4,446
Speech pathology/audiology	4,337	4,292	4,445	4,340	3,919	4,316	4,546	4,494	5,124
Veterinary sciences	337	402	491	486	575	589	649	698	706
Clinical medicine, n.e.c.	977	970	1,097	1,064	1,121	1,187	1,334	1,355	1,563
Health related, n.e.c.	2,384	2,530	2,547	2,786	3,181	3,409	4,111	4,785	5,716

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 18. Part-time science and engineering graduate students in doctorate-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	106,194	108,101	113,310	115,136	115,171	115,591	114,333	116,047	124,540
Total, science/engineering fields	89,449	90,150	95,202	95,915	96,415	96,343	95,269	97,594	101,239
Engineering, total	32,189	32,644	34,969	36,309	36,171	34,857	34,019	34,977	36,167
Aerospace	448	468	526	633	625	669	645	829	727
Agricultural	203	181	174	173	139	160	180	146	158
Biomedical	173	182	200	201	261	274	281	305	289
Chemical	1,562	1,540	1,521	1,349	1,327	1,202	1,116	1,205	1,267
Civil	4,503	4,518	4,571	4,398	4,245	4,267	4,284	4,543	5,149
Electrical	10,594	11,030	11,915	11,999	12,446	12,643	12,510	12,449	12,599
Engineering science	642	644	592	701	755	762	809	761	767
Industrial	5,416	5,384	6,505	7,132	7,409	6,525	5,731	5,643	6,351
Mechanical	3,911	4,455	4,563	4,993	5,109	4,838	4,775	4,765	5,249
Metallurgical/materials	652	709	748	737	835	786	782	885	961
Mining	94	74	92	68	78	71	76	103	150
Nuclear	151	216	190	206	235	198	211	198	202
Petroleum	117	130	201	175	171	141	157	181	186
Engineering, n.e.c.	3,723	3,113	3,171	3,544	2,536	2,321	2,462	2,964	2,112
Sciences, total	57,260	57,506	60,233	59,606	60,244	61,486	61,250	62,617	65,072
Physical sciences	3,245	3,263	3,374	3,474	3,315	3,434	3,378	3,507	3,574
Astronomy	33	43	36	35	41	26	27	20	19
Chemistry	2,053	1,984	2,085	2,065	1,932	1,900	1,903	2,008	2,028
Physics	1,151	1,185	1,194	1,261	1,252	1,414	1,355	1,377	1,418
Physical sciences, n.e.c.	8	51	59	113	90	94	93	102	109
Earth, atmospheric, and ocean sciences	2,811	3,045	3,373	3,150	3,271	3,065	2,981	3,010	3,344
Atmospheric sciences	106	125	84	102	126	104	97	97	99
Geosciences	1,780	1,919	2,183	2,066	1,974	1,844	1,788	1,624	1,596
Oceanography	360	411	464	375	419	350	325	317	339
Earth, atmos., and ocean sci., n.e.c.	565	590	642	607	752	767	771	972	1,310
Mathematical sciences	4,532	4,420	4,073	3,893	3,781	3,957	3,800	3,959	4,001
Computer sciences	9,030	10,258	11,449	11,787	12,444	13,016	12,418	12,858	13,110
Agricultural sciences	2,134	2,022	1,984	1,842	1,739	1,722	1,830	1,896	1,954
Biological sciences	6,343	6,229	6,722	6,713	6,382	6,360	6,308	6,739	6,811
Anatomy	116	93	102	80	87	83	79	89	90
Biochemistry	213	215	186	227	178	167	249	195	222
Biology	2,023	1,979	2,316	2,395	2,132	2,091	1,923	2,109	2,144
Biometry/epidemiology	279	253	364	386	420	499	541	670	620
Biophysics	13	14	60	98	123	48	45	27	18
Botany	370	379	465	377	404	372	383	345	382
Cell biology	44	47	23	61	78	55	57	68	93
Ecology	127	169	114	112	115	141	165	199	200
Entomology/parasitology	170	174	204	199	182	179	172	176	157
Genetics	67	70	61	90	106	101	110	106	107
Microbiology	457	426	475	427	362	412	443	452	479
Nutrition	1,211	1,128	1,089	1,059	1,084	1,169	1,180	1,141	1,062
Pathology	355	346	279	268	264	226	216	239	308
Pharmacology	132	120	112	120	149	139	130	143	128
Physiology	228	191	225	215	217	212	149	160	169
Zoology	365	422	404	357	322	314	309	413	408
Biosciences, n.e.c.	173	203	243	242	159	152	157	207	224
Psychology	7,803	8,374	9,094	8,622	8,634	9,073	9,152	9,589	10,306
Social sciences	21,362	19,895	20,164	20,125	20,678	20,859	21,383	21,059	21,972
Agricultural economics	243	237	254	269	329	331	342	298	345
Anthropology	1,533	1,471	1,603	1,586	1,468	1,511	1,580	1,511	1,482
Economics (except agricultural)	3,130	2,995	2,742	2,533	2,459	2,467	2,485	2,479	2,492
Geography	603	594	576	640	621	646	719	717	791
History and philosophy of science	24	31	45	29	27	22	39	29	43
Linguistics	497	656	501	512	532	443	530	499	556
Political science	10,418	9,106	9,717	9,802	10,616	10,376	10,662	10,283	10,823
Sociology	1,805	1,693	1,639	1,523	1,572	1,606	1,653	1,562	1,776
Sociology/anthropology	418	388	372	354	355	374	339	366	307
Social sciences, n.e.c.	2,691	2,724	2,715	2,877	2,699	3,083	3,034	3,315	3,357
Total, health fields	16,745	17,951	18,108	19,221	18,756	19,248	19,064	18,453	23,301
Dentistry	75	82	90	113	148	155	148	129	141
Neurology	3	4	2	3	2	3	15	12	13
Nursing	9,260	10,231	9,929	10,147	9,664	9,649	9,301	8,432	13,052
Pharmaceutical sciences	859	731	746	831	779	703	792	792	879
Preventive medicine/community health	2,566	2,742	3,015	3,007	3,202	3,356	3,370	3,632	3,875
Speech pathology/audiology	1,500	1,480	1,539	1,690	1,523	1,610	1,602	1,781	1,765
Veterinary sciences	103	129	119	121	136	146	133	183	169
Clinical medicine, n.e.c.	305	323	383	356	382	393	261	260	329
Health related, n.e.c.	2,074	2,229	2,285	2,953	2,920	3,233	3,442	3,232	3,078

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 19. Science and engineering graduate students in master's-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	51,016	51,794	51,736	52,208	53,083	51,843	55,340	59,435	64,395
Total, science/engineering fields	44,098	44,682	44,626	44,907	45,328	44,083	47,426	51,692	54,517
Engineering, total	6,628	6,544	6,729	7,299	7,675	7,036	7,937	8,974	9,315
Aerospace	32	32	32	33	35	37	67	91	67
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	59	57	56	68	76	79	66	63	48
Chemical	211	177	135	121	121	86	99	116	127
Civil	885	832	827	885	1,093	926	992	1,118	1,280
Electrical	1,668	1,707	1,753	2,068	2,311	2,182	2,948	3,378	3,492
Engineering science	280	253	260	234	232	219	19	18	30
Industrial	827	880	994	1,052	1,003	1,030	1,235	1,492	1,560
Mechanical	822	889	911	1,133	1,214	1,183	1,279	1,353	1,200
Metallurgical/materials	109	85	120	131	122	108	120	138	154
Mining	26	25	26	25	29	39	30	28	14
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	13	12	30	21	28	31	14	14	11
Engineering, n.e.c.	1,696	1,595	1,585	1,528	1,411	1,116	1,068	1,165	1,332
Sciences, total	37,470	38,138	37,897	37,608	37,653	37,047	39,489	42,718	45,202
Physical sciences	1,709	1,646	1,669	1,705	1,763	1,750	1,813	1,770	1,962
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	1,248	1,153	1,148	1,135	1,152	1,090	1,099	1,042	1,105
Physics	294	346	375	425	477	521	541	571	645
Physical sciences, n.e.c.	167	147	146	145	134	139	173	157	212
Earth, atmospheric, and ocean sciences	1,263	1,326	1,328	1,174	1,154	1,131	1,147	1,265	1,523
Atmospheric sciences	12	12	13	5	4	11	12	4	12
Geosciences	633	654	761	643	613	561	482	515	560
Oceanography	156	173	97	101	105	107	137	135	120
Earth, atmos., and ocean sci., n.e.c.	462	487	457	425	432	452	516	611	831
Mathematical sciences	2,534	2,430	2,362	2,351	2,402	2,346	2,534	2,669	2,466
Computer sciences	5,310	5,444	6,021	6,221	6,054	5,843	6,117	6,826	7,035
Agricultural sciences	752	735	700	654	665	698	683	738	728
Biological sciences	4,441	4,221	4,075	3,836	3,797	3,636	3,816	3,843	4,027
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	40	30	34	33	45	32	39	34	41
Biology	3,544	3,407	3,229	2,949	2,932	2,829	2,904	2,952	3,049
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	45	33	28	48	45	44	38	51	50
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	45	54	50	56	64	65	72	94	101
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	49	47	45	43	41	42	44	44	42
Microbiology	125	97	105	94	95	66	64	62	58
Nutrition	258	254	309	334	312	301	342	307	332
Pathology	43	44	47	65	56	57	66	67	71
Pharmacology	6	5	2	2	1	1	2	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	40	37	32	18	16	12	14	13	19
Biosciences, n.e.c.	246	213	194	194	190	187	231	219	264
Psychology	10,987	10,991	10,788	10,898	11,318	11,767	12,654	13,999	15,234
Social sciences	10,474	11,345	10,954	10,769	10,500	9,876	10,725	11,608	12,227
Agricultural economics	58	67	68	64	51	50	49	41	53
Anthropology	245	219	223	213	227	235	212	250	285
Economics (except agricultural)	1,147	1,087	1,111	946	896	833	860	764	803
Geography	445	458	421	484	552	607	692	675	662
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	209	240	251	290	362	362	421	484	350
Political science	5,834	5,791	5,767	5,644	5,381	5,642	6,138	6,537	6,856
Sociology	558	630	573	618	637	619	730	862	1,091
Sociology/anthropology	186	115	128	117	100	79	76	87	75
Social sciences, n.e.c.	1,792	2,738	2,412	2,393	2,294	1,449	1,547	1,908	2,052
Total, health fields	6,918	7,112	7,110	7,301	7,755	7,760	7,914	7,743	9,878
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	14	14	13	10	22	14	9	20	25
Nursing	1,959	2,074	2,014	2,230	2,446	2,650	2,636	2,246	3,649
Pharmaceutical sciences	16	19	20	10	5	4	8	2	1
Preventive medicine/community health	187	184	186	187	201	142	139	164	274
Speech pathology/audiology	1,999	1,973	2,002	1,927	1,960	1,742	1,940	2,160	2,430
Veterinary sciences	26	26	27	23	20	17	19	19	19
Clinical medicine, n.e.c.	343	263	229	250	238	226	201	166	172
Health related, n.e.c.	2,374	2,559	2,619	2,664	2,863	2,965	2,962	2,966	3,308

NOTE: Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 20. Full-time science and engineering graduate students in master's-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	17,680	18,181	17,855	17,977	18,585	17,907	18,661	20,117	21,913
Total, science/engineering fields	15,170	15,667	15,338	15,420	15,889	15,385	16,082	17,505	18,414
Engineering, total	1,637	1,565	1,476	1,695	1,842	1,921	2,183	2,314	2,305
Aerospace	15	14	14	16	17	16	30	64	67
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	19	15	12	14	40	53	39	37	25
Chemical	79	78	52	52	42	29	37	33	55
Civil	274	236	242	278	271	328	331	281	378
Electrical	349	396	394	490	583	641	799	811	807
Engineering science	17	16	18	18	17	13	10	11	7
Industrial	192	162	175	171	188	222	269	387	283
Mechanical	152	187	192	202	209	240	279	325	283
Metallurgical/materials	18	9	18	30	27	23	28	24	25
Mining	24	21	20	23	29	36	26	28	11
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	13	12	26	21	25	29	12	9	7
Engineering, n.e.c.	485	419	313	380	394	291	323	304	357
Sciences, total	13,533	14,102	13,862	13,725	14,047	13,464	13,899	15,191	16,109
Physical sciences	703	705	731	695	762	796	779	698	767
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	528	508	513	460	500	506	462	387	407
Physics	134	164	184	204	226	265	279	276	324
Physical sciences, n.e.c.	41	33	34	31	36	25	38	35	36
Earth, atmospheric, and ocean sciences	552	553	568	461	446	455	422	443	534
Atmospheric sciences	7	6	5	1	2	4	7	0	2
Geosciences	295	296	353	274	255	250	197	230	219
Oceanography	65	81	42	42	48	53	54	55	64
Earth, atmos., and ocean sci., n.e.c.	185	170	168	144	141	148	164	158	249
Mathematical sciences	643	702	673	667	703	714	691	680	734
Computer sciences	1,411	1,479	1,727	1,921	1,933	1,698	1,734	2,170	1,969
Agricultural sciences	416	427	376	377	372	398	388	409	445
Biological sciences	1,875	1,792	1,662	1,554	1,570	1,529	1,547	1,519	1,647
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	26	18	17	15	14	9	16	15	14
Biology	1,517	1,461	1,354	1,235	1,245	1,228	1,225	1,206	1,301
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	30	24	22	39	40	36	33	43	47
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	9	12	12	13	12	14	7	6	11
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	45	44	43	42	41	41	43	42	41
Microbiology	24	23	12	18	19	13	9	14	9
Nutrition	106	123	124	127	122	118	137	98	102
Pathology	5	6	7	5	15	9	15	28	28
Pharmacology	2	1	0	0	0	0	0	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	27	19	19	12	12	11	8	6	19
Biosciences, n.e.c.	84	61	52	48	50	50	54	61	75
Psychology	4,571	4,530	4,460	4,572	4,933	5,052	5,368	6,039	6,330
Social sciences	3,362	3,914	3,665	3,478	3,328	2,822	2,970	3,233	3,683
Agricultural economics	53	52	44	49	34	31	27	27	35
Anthropology	74	68	111	55	71	77	75	83	108
Economics (except agricultural)	356	346	361	335	320	285	290	273	316
Geography	190	192	185	177	240	260	258	229	242
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	59	55	34	51	61	81	76	50	51
Political science	1,645	1,774	1,643	1,605	1,396	1,411	1,510	1,688	1,876
Sociology	237	328	289	259	290	262	294	353	399
Sociology/anthropology	75	34	31	34	33	28	26	38	41
Social sciences, n.e.c.	673	1,065	967	913	883	387	414	492	615
Total, health fields	2,510	2,514	2,517	2,557	2,696	2,522	2,579	2,612	3,499
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	14	14	13	3	5	7	3	10	10
Nursing	478	431	473	499	574	679	634	406	904
Pharmaceutical sciences	2	2	2	0	1	1	0	0	0
Preventive medicine/community health	35	40	47	47	50	44	35	58	54
Speech pathology/audiology	918	973	1,001	1,051	1,075	931	1,094	1,244	1,522
Veterinary sciences	26	23	24	20	17	17	19	11	11
Clinical medicine, n.e.c.	95	60	48	63	50	46	52	47	49
Health related, n.e.c.	942	971	909	874	924	797	742	836	949

NOTE: Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 21. Part-time science and engineering graduate students in master's-granting institutions, by field: 1983-91

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Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	33,336	33,613	33,881	34,231	34,498	33,936	36,679	39,318	42,482
Total, science/engineering fields	28,928	29,015	29,288	29,487	29,439	28,698	31,344	34,187	36,103
Engineering, total	4,991	4,979	5,253	5,604	5,833	5,115	5,754	6,660	7,010
Aerospace	17	18	18	17	18	21	37	27	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	40	42	44	54	36	26	27	26	23
Chemical	132	99	83	69	79	57	62	83	72
Civil	611	596	585	607	822	598	661	837	902
Electrical	1,319	1,311	1,359	1,578	1,728	1,541	2,149	2,567	2,685
Engineering science	263	237	242	216	215	206	9	7	23
Industrial	635	718	819	881	815	808	966	1,105	1,277
Mechanical	670	702	719	931	1,005	943	1,000	1,028	917
Metallurgical/materials	91	76	102	101	95	85	92	114	129
Mining	2	4	6	2	0	3	4	0	3
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	4	0	3	2	2	5	4
Engineering, n.e.c.	1,211	1,176	1,272	1,148	1,017	825	745	861	975
Sciences, total	23,937	24,036	24,035	23,883	23,606	23,583	25,590	27,527	29,093
Physical sciences	1,006	941	938	1,010	1,001	954	1,034	1,072	1,195
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	720	645	635	675	652	584	637	655	698
Physics	160	182	191	221	251	256	262	295	321
Physical sciences, n.e.c.	126	114	112	114	98	114	135	122	176
Earth, atmospheric, and ocean sciences	711	773	760	713	708	676	725	822	989
Atmospheric sciences	5	6	8	4	2	7	5	4	10
Geosciences	338	358	408	369	358	311	285	285	341
Oceanography	91	92	55	59	57	54	83	80	56
Earth, atmos., and ocean sci., n.e.c.	277	317	289	281	291	304	352	453	582
Mathematical sciences	1,891	1,728	1,689	1,684	1,699	1,632	1,843	1,989	1,732
Computer sciences	3,899	3,965	4,294	4,300	4,121	4,145	4,383	4,656	5,066
Agricultural sciences	336	308	324	277	293	300	295	329	283
Biological sciences	2,566	2,429	2,413	2,282	2,227	2,107	2,269	2,324	2,380
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	14	12	17	18	31	23	23	19	27
Biology	2,027	1,946	1,875	1,714	1,687	1,601	1,679	1,746	1,748
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	15	9	6	9	5	8	5	8	3
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	36	42	38	43	52	51	65	88	90
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	4	3	2	1	0	1	1	2	1
Microbiology	101	74	93	76	76	53	55	48	49
Nutrition	152	131	185	207	190	183	205	209	230
Pathology	38	38	40	60	41	48	51	39	43
Pharmacology	4	4	2	2	1	1	2	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	13	18	13	6	4	1	6	7	0
Biosciences, n.e.c.	162	152	142	146	140	137	177	158	189
Psychology	6,416	6,461	6,328	6,326	6,385	6,715	7,286	7,960	8,904
Social sciences	7,112	7,431	7,289	7,291	7,172	7,054	7,755	8,375	8,544
Agricultural economics	5	15	24	15	17	19	22	14	18
Anthropology	171	151	112	158	156	158	137	167	177
Economics (except agricultural)	791	741	750	611	576	548	570	491	487
Geography	255	266	236	307	312	347	434	446	420
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	150	185	217	239	301	281	345	434	299
Political science	4,189	4,017	4,124	4,039	3,985	4,231	4,628	4,849	4,980
Sociology	321	302	284	359	347	357	436	509	692
Sociology/anthropology	111	81	97	83	67	51	50	49	34
Social sciences, n.e.c.	1,119	1,673	1,445	1,480	1,411	1,062	1,133	1,416	1,437
Total, health fields	4,408	4,598	4,593	4,744	5,059	5,238	5,335	5,131	6,379
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	7	17	7	6	10	15
Nursing	1,481	1,643	1,541	1,731	1,872	1,971	2,002	1,840	2,745
Pharmaceutical sciences	14	17	18	10	4	3	8	2	1
Preventive medicine/community health	152	144	139	140	151	98	104	106	220
Speech pathology/audiology	1,081	1,000	1,001	876	885	811	846	916	908
Veterinary sciences	0	3	3	3	3	0	0	8	8
Clinical medicine, n.e.c.	248	203	181	187	188	180	149	119	123
Health related, n.e.c.	1,432	1,588	1,710	1,790	1,939	2,168	2,220	2,130	2,359

NOTE: Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Total, all institutions	475,691	300,833	114,407	60,451
New England	34,932	21,159	9,251	4,522
Connecticut	7,217	4,770	1,271	1,176
Central Connecticut State University	32	32	0	0
Connecticut College	31	31	0	0
Quinnipiac College	197	0	0	197
Southern Connecticut State University	203	110	0	93
St. Joseph College	176	118	0	58
The Hartford Graduate Center	780	337	443	0
Trinity College	53	53	0	0
University of Bridgeport	33	17	16	0
University of Connecticut	2,551	1,548	492	511
University of Hartford	303	218	9	76
University of New Haven	837	700	137	0
Wesleyan University	128	128	0	0
Western Connecticut State University	32	32	0	0
Yale University	1,861	1,446	174	241
Maine	752	563	157	32
University of Maine	711	554	157	0
University of New England	41	9	0	32
Massachusetts	22,896	12,953	6,975	2,968
American International College	164	164	0	0
Anna Maria College	102	76	0	26
Assumption College	143	77	0	66
Boston College	678	464	0	214
Boston University	2,631	1,637	586	408
Brandeis University	428	428	0	0
Bridgewater State College	46	46	0	0
Clark University	275	275	0	0
Emerson College	72	0	0	72
Framingham State College	12	12	0	0
Harvard University	3,472	2,848	197	427
MGH Institute of Health Professions	193	6	0	187
Mass College of Pharmacy/Allied Health	46	24	0	22
Massachusetts Institute of Technology	4,243	1,967	2,272	4
Mount Holyoke College	14	14	0	0
Northeastern University	2,581	961	1,155	465
Salem State College	113	20	0	93
Smith College	6	6	0	0
Tufts University	1,044	611	316	117
University of Massachusetts	3,262	2,087	667	508
University of Massachusetts Dartmouth	187	93	67	27
University of Massachusetts Lowell	2,049	838	958	253
Western New England College	238	11	148	79
Williams College	14	14	0	0
Woods Hole Oceanographic Institution	0	0	0	0
Worcester Polytechnic Institute	882	273	609	0
Worcester State College	1	1	0	0
New Hampshire	1,199	849	287	63
Dartmouth College	362	249	113	0
Rivier College	140	140	0	0
University of New Hampshire	697	460	174	63
Rhode Island	2,184	1,493	447	244
Brown University	761	644	117	0
Providence College	0	0	0	0
Rhode Island College	84	84	0	0
University of Rhode Island	1,339	765	330	244
Vermont	684	531	114	39
Goddard College	35	35	0	0
Marlboro College	0	0	0	0
Middlebury College	1	1	0	0
University of Vermont & St Agric Colleg	648	495	114	39
Middle Atlantic	82,009	53,594	18,141	10,274
New Jersey	11,860	8,111	3,092	657
Drew University	21	21	0	0
Fairleigh Dickinson University	1,005	913	92	0
Kean College of New Jersey	131	131	0	0
Monmouth College(NJ)	250	87	163	0
Montclair State College	512	512	0	0
New Jersey Institute of Technology	1,848	762	1,086	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

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Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
New Jersey, continued				
Princeton University	1,374	997	377	0
Rutgers the State University	4,375	3,196	795	384
Seton Hall University	540	396	0	144
Stevens Institute of Technology	1,343	764	579	0
Trenton State College	35	8	0	27
Univ of Med and Dent of New Jersey	291	239	0	52
William Paterson College	135	85	0	50
New York	47,649	32,380	8,830	6,439
Adelphi University	798	380	0	418
Albany Medical College Grad Studies Pro	87	70	0	17
Alfred University	115	35	80	0
CUNY Bernard Baruch College	471	372	0	99
CUNY Brooklyn College	799	669	0	130
CUNY City College	1,263	650	591	22
CUNY College of Staten Island St George	93	93	0	0
CUNY Graduate School and Univ Center	1,841	1,638	138	65
CUNY Herbert H. Lehman College	61	61	0	0
CUNY Hunter College	749	399	0	350
CUNY John Jay College of Crim Justice	533	533	0	0
CUNY Mt. Sinai Sch of Medicine	164	164	0	0
CUNY Queens College	473	433	0	40
Clarkson University	286	87	199	0
College of New Rochelle	283	127	0	156
College of St Rose	121	16	0	105
Columbia University Main Division	2,964	1,670	743	551
Columbia University Teachers College	2,030	1,383	0	647
Cooper Union	54	0	54	0
Cornell University	3,453	2,450	926	77
Fordham University	598	598	0	0
Hofstra University	508	402	0	106
Iona College	614	445	0	169
Ithaca College	22	0	0	22
Long Island University	1,403	862	0	541
Manhattan College	362	31	331	0
Marist College	293	293	0	0
New School for Social Research	848	848	0	0
New York Institute of Technology	887	702	185	0
New York Medical College	203	160	0	43
New York University	3,315	2,900	0	415
Niagara University	13	13	0	0
Pace University	1,144	918	0	226
Polytechnic University	1,667	581	1,086	0
Pratt Institute	8	0	8	0
Rensselaer Polytechnic Institute	2,036	663	1,373	0
Rochester Institute of Technology	963	675	277	11
Rockefeller University	128	128	0	0
Russell Sage College	776	348	0	428
SUNY - Albany	1,384	1,328	0	56
SUNY - Binghamton	1,214	703	439	72
SUNY - Buffalo	3,445	1,875	1,003	567
SUNY - Coll of Env Science and Forestry	427	338	89	0
SUNY - Health Sci Ctr at Brooklyn	115	98	0	17
SUNY - Health Sci Ctr at Syracuse	82	68	0	14
SUNY - Stony Brook	2,406	1,861	231	314
SUNY College at Brockport	255	216	0	39
SUNY College at Buffalo	24	24	0	0
SUNY College at Cortland	14	14	0	0
SUNY College at Fredonia	21	21	0	0
SUNY College at Geneseo	42	10	0	32
SUNY College at New Paltz	225	225	0	0
SUNY College at Oneonta	5	5	0	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
New York, continued				
SUNY College at Oswego	216	216	0	0
SUNY College at Plattsburgh	35	35	0	0
SUNY College at Potsdam	2	2	0	0
SUNY College of Technology at Utica/Rom	70	70	0	0
SUNY State College of Optometry	22	0	0	22
Sarah Lawrence College	42	42	0	0
St Bonaventure University	15	15	0	0
St John's University	705	457	0	248
Syracuse University	2,164	1,137	791	236
Union College(NY)	140	40	86	14
University of Rochester	1,422	1,150	200	72
Vassar College	3	3	0	0
Wagner College	96	23	0	73
Yeshiva University	632	607	0	25
Pennsylvania	22,500	13,103	6,219	3,178
Bloomsburg University of Pennsylvania	92	13	0	79
Bryn Mawr College	154	154	0	0
Bucknell University	57	27	30	0
California University of Pennsylvania	209	156	0	53
Carnegie-Mellon University	1,656	1,054	602	0
Clarion University of Pennsylvania	127	81	0	46
Drexel University	1,566	573	993	0
Duquesne University	401	222	0	179
East Stroudsburg Univ of Pennsylvania	103	103	0	0
Edinboro University of Pennsylvania	220	126	0	94
Gannon University	260	89	47	124
Hahnemann University	572	387	0	185
Indiana University of Pennsylvania	140	140	0	0
Kutztown University of Pennsylvania	173	173	0	0
Lehigh University	1,022	388	634	0
Mansfield University of Pennsylvania	16	16	0	0
Marywood College	119	119	0	0
Millersville University of Pennsylvania	124	111	13	0
Pennsylvania State University	4,419	2,475	1,796	148
Phila College of Osteopathic Medicine	0	0	0	0
Philadelphia Coll of Pharmacy and Sci	60	29	0	31
Shippensburg University of Pennsylvania	336	336	0	0
Slippery Rock University of Pennsylvani	190	38	0	152
St Joseph's University	461	239	0	222
Swarthmore College	0	0	0	0
Temple University	1,592	1,100	89	403
The Medical College of Pennsylvania	109	78	0	31
Thomas Jefferson University	269	183	0	86
University of Pennsylvania	2,533	1,836	632	65
University of Pittsburgh	3,944	1,933	816	1,195
University of Scranton	137	105	0	32
Villanova University	959	542	417	0
West Chester University of Pennsylvania	306	269	0	37
Widener University	133	0	133	0
Wilkes University	41	8	17	16
East North Central	83,758	52,431	20,472	10,855
Illinois	24,590	17,027	4,423	3,140
Bradley University	255	70	185	0
Chicago Coll of Osteo Medicine	0	0	0	0
Chicago School of Prof Psych	134	134	0	0
Chicago State University	176	176	0	0
De Paul University	1,489	1,405	0	84
Eastern Illinois University	176	150	0	26
Forest Institute of Prof Psych	206	206	0	0
Governors State University	618	413	0	205
Illinois Institute of Technology	1,818	1,117	701	0
Illinois State University	570	505	0	65
Loyola University of Chicago	755	611	0	144

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Illinois, continued				
Northeastern Illinois University	550	511	0	39
Northern Illinois University	1,231	844	179	208
Northwestern University	2,007	1,167	633	207
Roosevelt University	337	337	0	0
Rush University	479	92	0	387
Sangamon State University	764	690	0	74
Southern Illinois Univ at Carbondale	1,618	1,123	242	253
Southern Illinois Univ at Edwardsville	677	437	100	140
University of Chicago	1,830	1,809	0	21
University of Health Sciences (Chicago)	131	124	0	7
University of Illinois at Chicago	3,355	1,444	943	968
University of Illinois at Urbana	4,938	3,276	1,440	222
Western Illinois University	476	386	0	90
Indiana	10,111	6,806	2,090	1,215
Ball State University	429	335	0	94
Butler University	20	15	0	5
Indiana State University	372	319	35	18
Indiana University	4,135	3,379	45	711
Indiana Wesleyan University	23	0	0	23
Purdue University	4,022	2,051	1,672	299
Rose-Hulman Institute of Technology	120	15	105	0
Saint Francis College	46	46	0	0
University of Evansville	60	6	13	41
University of Notre Dame	822	602	220	0
Valparaiso University	62	38	0	24
Michigan	17,055	9,686	5,393	1,976
Andrews University	283	131	0	152
Central Michigan University	335	292	0	43
Eastern Michigan University	987	732	223	32
Grand Valley State University	232	84	0	148
Michigan State University	3,103	2,406	520	177
Michigan Technological University	483	192	291	0
Northern Michigan University	215	129	0	86
Oakland University	750	311	367	72
University of Detroit	668	435	164	69
University of Michigan	5,252	2,329	2,461	462
Wayne State University	3,056	1,390	1,086	580
Western Michigan University	1,691	1,255	281	155
Ohio	21,944	12,828	6,098	3,018
Air Force Institute of Technology	589	155	434	0
Antioch University	1,593	1,500	93	0
Bowling Green State University	600	582	0	18
Case Western Reserve University	1,669	737	643	289
Cleveland State University	1,179	693	412	74
John Carroll University	51	51	0	0
Kent State University	1,059	807	0	252
Medical College of Ohio at Toledo	290	0	0	290
Miami University	485	443	15	27
NE Ohio Univ Med School	0	0	0	0
Ohio State University	5,439	3,352	1,237	850
Ohio University	1,014	682	277	55
Union Institute	556	519	4	33
University of Akron	1,609	819	495	295
University of Cincinnati	2,721	1,127	1,116	478
University of Dayton	896	229	667	0
University of Toledo	751	377	318	56
Wright State University	1,144	584	309	251
Xavier University	113	63	0	50
Youngstown State University	186	108	78	0
Wisconsin	10,058	6,084	2,468	1,506
Marquette University	808	223	397	188
Medical College of Wisconsin	102	102	0	0
Milwaukee School of Engineering	349	0	349	0
University of Wisconsin - Eau Claire	122	20	0	102

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

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Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Wisconsin, continued				
University of Wisconsin - Green Bay	45	45	0	0
University of Wisconsin - La Crosse	81	55	0	26
University of Wisconsin - Madison	5,914	4,031	1,228	655
University of Wisconsin - Milwaukee	1,827	1,209	416	202
University of Wisconsin - Oshkosh	299	179	0	120
University of Wisconsin - Platteville	23	14	9	0
University of Wisconsin - River Falls	55	55	0	0
University of Wisconsin - Stevens Point	111	48	0	63
University of Wisconsin - Stout	246	55	69	122
University of Wisconsin - Whitewater	76	48	0	28
West North Central	30,873	20,023	6,707	4,143
Iowa	5,740	3,640	1,291	809
Drake University	172	109	0	63
Iowa State University of Sci & Tech	2,818	1,962	849	7
Loras College	23	23	0	0
Maharishi International University	78	78	0	0
Teikyo Marycrest College	38	38	0	0
Univ. of Osteopathic Med & Health Sci	74	0	0	74
University of Iowa	2,420	1,353	442	625
University of Northern Iowa	117	77	0	40
Kansas	5,478	3,500	1,153	825
Emporia State University - Kansas	129	129	0	0
Fort Hays State University	95	95	0	0
Kansas State University	1,532	1,204	289	39
Pittsburg State University	342	294	48	0
University of Kansas	2,403	1,418	501	484
Washburn University of Topeka	32	32	0	0
Wichita State University	945	328	315	302
Minnesota	7,398	5,367	1,236	795
Bemidji State University	20	20	0	0
Mankato State University	346	319	0	27
Mayo Graduate School	120	104	0	16
Moorhead State University	184	144	0	40
St Mary's College of Minnesota	938	792	0	146
St. Cloud State University	70	34	0	36
University of Minnesota	5,720	3,954	1,236	530
Missouri	7,421	4,245	1,992	1,184
Central Missouri State University	362	274	41	47
Kirksville College of Osteopathic Med	0	0	0	0
Lincoln University	32	32	0	0
Northeast Missouri State University	28	17	0	11
Northwest Missouri State University	44	44	0	0
Southeast Missouri State University	43	43	0	0
Southwest Missouri State University	217	133	0	84
St. Louis University	870	385	10	475
Univ of Health Sciences (Kansas City)	0	0	0	0
University of Missouri - Columbia	1,983	1,285	526	172
University of Missouri - Kansas City	790	552	0	238
University of Missouri - Rolla	1,261	327	934	0
University of Missouri - St Louis	281	281	0	0
Washington University	1,510	872	481	157
Nebraska	2,781	1,991	484	306
Creighton University	116	71	0	45
Kearney State College	46	33	0	13
University of Nebraska - Lincoln	1,756	1,236	484	36
University of Nebraska - Omaha	591	591	0	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

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Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Nebraska, continued				
University of Nebraska Medical Center	272	60	0	212
North Dakota	916	709	156	51
North Dakota State University	615	480	119	16
University of North Dakota	301	229	37	35
South Dakota	1,139	571	395	173
South Dakota School of Mines and Tech	274	78	196	0
South Dakota State University	629	291	199	139
University of South Dakota	236	202	0	34
South Atlantic	71,967	45,141	17,296	9,530
Delaware	1,470	1,003	402	65
Delaware State College	23	23	0	0
University of Delaware	1,447	980	402	65
District of Columbia	8,729	6,057	1,918	754
Catholic University of America	883	425	259	199
Gallaudet University	25	0	0	25
George Washington University	4,544	2,638	1,569	337
Georgetown University	750	633	0	117
Howard University	778	655	90	33
The American University	1,656	1,656	0	0
University of the District of Columbia	93	50	0	43
Florida	14,600	8,579	3,874	2,147
Florida A & M University	182	90	43	49
Florida Atlantic University	860	475	347	38
Florida Institute of Technology	1,028	709	319	0
Florida International University	893	578	162	153
Florida State University	1,503	1,203	157	143
Jacksonville University	26	26	0	0
Nova University	940	820	0	120
University of Central Florida	1,403	612	606	185
University of Florida	3,741	1,972	1,252	517
University of Miami	1,289	837	318	134
University of South Florida	2,334	856	670	808
University of West Florida	401	401	0	0
Georgia	8,701	5,160	2,650	891
Augusta College	49	49	0	0
Clark Atlanta University	282	282	0	0
Emory University	986	549	0	437
Fort Valley State College	73	73	0	0
Georgia College	262	215	0	47
Georgia Institute of Technology	3,326	842	2,484	0
Georgia Southern University	135	135	0	0
Georgia State University	1,149	950	0	199
Institute of Paper Science & Technology	70	0	70	0
Medical College of Georgia	200	82	0	118
Mercer University	116	30	83	3
Morehouse School of Medicine	0	0	0	0
University of Georgia	1,666	1,585	13	68
Valdosta State College	266	247	0	19
West Georgia College	121	121	0	0
Maryland	10,241	6,554	2,024	1,663
Coppin State College	31	31	0	0
Frostburg State University	64	64	0	0
Hood College	391	391	0	0
Johns Hopkins University	1,880	1,029	220	631
Loyola College	806	477	278	51
Morgan State University	57	57	0	0
Towson State University	500	338	0	162
Uniformed Serv Univ of the Hlth Science	118	88	0	30
University of Baltimore	272	272	0	0
University of Maryland - Balt Prof Sch	1,069	355	0	714
University of Maryland - Baltimore Cnty	1,026	803	212	11
University of Maryland - College Park	3,876	2,498	1,314	64
University of Maryland Eastern Shore	104	104	0	0
Washington College	47	47	0	0
North Carolina	10,282	6,809	1,828	1,645
Appalachian State University	242	242	0	0
Duke University	1,412	1,074	264	74
East Carolina University	402	259	0	143
North Carolina A & T State University	253	70	183	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
North Carolina, continued				
North Carolina Central University	76	76	0	0
North Carolina State Univ at Raleigh	3,115	1,812	1,223	80
Univ of North Carolina at Chapel Hill	3,101	2,139	41	921
Univ of North Carolina at Charlotte	650	430	117	103
Univ of North Carolina at Greensboro	585	303	0	282
University of North Carolina/Wilmington	74	74	0	0
Wake Forest University	241	229	0	12
Western Carolina University	131	101	0	30
South Carolina	3,993	2,356	1,132	505
Clemson University	1,795	927	802	66
College of Charleston	67	67	0	0
Furman University	7	7	0	0
Medical University of South Carolina	167	154	0	13
University of South Carolina	1,892	1,136	330	426
Winthrop College	65	65	0	0
Virginia	11,588	7,292	2,956	1,340
College of William and Mary	371	355	16	0
Eastern Virginia Medical School	118	118	0	0
George Mason University	2,299	1,786	317	196
Hampton University	110	64	0	46
Hollins College	5	5	0	0
Institute of Textile Technology	30	0	30	0
James Madison University	159	108	0	51
Old Dominion University	1,267	674	426	167
Radford University	228	169	0	59
University of Richmond	28	28	0	0
University of Virginia	1,943	1,242	632	69
Virginia Commonwealth University	1,853	1,128	16	709
Virginia Polytechnic Inst and State Uni	3,113	1,551	1,519	43
Virginia State University	64	64	0	0
West Virginia	2,363	1,331	512	520
Marshall University	261	204	0	57
Univ of West Virginia Coll of Grad Stds	443	299	90	54
University of Charleston	1	1	0	0
West Virginia Institute of Technology	15	0	15	0
West Virginia Sch of Osteopathic Med	0	0	0	0
West Virginia University	1,643	827	407	409
East South Central	20,271	12,797	4,868	2,606
Alabama	6,486	3,606	1,808	1,072
Alabama A & M University	254	254	0	0
Alabama State University	10	10	0	0
Auburn University	1,844	1,142	590	112
Jacksonville State University	151	151	0	0
The University of Alabama	901	574	308	19
The University of Alabama at Birmingham	1,446	591	168	687
The University of Alabama in Huntsville	1,051	382	636	33
Troy State University in Montgomery	169	169	0	0
Tuskegee University	116	62	35	19
University of Montevallo	29	0	0	29
University of South Alabama	515	271	71	173
Kentucky	4,119	2,692	882	545
Eastern Kentucky University	171	171	0	0
Morehead State University	69	69	0	0
Murray State University	356	193	52	111
Spalding University	140	107	0	33
University of Kentucky	2,019	1,327	363	329
University of Louisville	1,156	617	467	72
Western Kentucky University	208	208	0	0
Mississippi	2,847	2,071	448	328
Jackson State University	269	269	0	0
Mississippi State University	1,161	802	345	14
Mississippi University for Women	28	0	0	28
University of Mississippi	805	558	103	144
University of Southern Mississippi	584	442	0	142
Tennessee	6,819	4,428	1,730	661
Austin Peay State University	37	37	0	0
East Tennessee State University	390	317	0	73
Fisk University	29	29	0	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

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Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
Tennessee, continued				
Meharry Medical College	54	54	0	0
Memphis State University	952	719	165	68
Middle Tennessee State University	529	529	0	0
Tennessee State University	226	185	41	0
Tennessee Technological University	323	153	170	0
University of Tennessee at Chattanooga	261	184	77	0
University of Tennessee at Knoxville	2,789	1,412	1,009	368
University of Tennessee, Memphis	213	112	0	101
Vanderbilt University	1,016	697	268	51
West South Central	45,631	27,198	11,757	6,676
Arkansas	2,312	1,225	669	418
Arkansas State University	357	254	0	103
University of Arkansas	1,269	600	669	0
University of Arkansas - Med Sci Campus	226	61	0	165
University of Arkansas at Little Rock	183	152	0	31
University of Central Arkansas	277	158	0	119
Louisiana	5,921	3,699	1,257	965
Grambling State University	9	9	0	0
Louisiana State University System	2,848	1,970	768	110
Louisiana Tech University	301	74	210	17
Loyola University in New Orleans	2	2	0	0
McNeese State University	142	126	16	0
Nicholls State University	40	40	0	0
Northeast Louisiana University	200	140	0	60
Northwest State University	161	44	0	117
Southeastern Louisiana University	32	32	0	0
Southern University A & M College	212	212	0	0
Tulane University of Louisiana	1,232	597	154	481
University of Southwestern Louisiana	607	453	109	45
Xavier University	135	0	0	135
Oklahoma	4,849	2,629	1,489	731
East Central University	8	8	0	0
Northeastern State University	204	103	70	31
Oklahoma State University	1,813	1,186	608	19
Southwestern Oklahoma State University	15	15	0	0
University of Oklahoma	2,529	1,143	705	681
University of Tulsa	280	174	106	0
Texas	32,549	19,645	8,342	4,562
Abilene Christian University	102	76	0	26
Angelo State University	123	123	0	0
Baylor College of Dentistry	48	6	0	42
Baylor College of Medicine	303	246	0	57
Baylor University	504	344	0	160
Corpus Christi State University	189	134	0	55
East Texas State University	346	346	0	0
Incarnate Word College	140	74	0	66
Lamar University	512	216	239	57
Midwestern State University	142	142	0	0
Prairie View A & M University	143	123	20	0
Rice University	825	582	243	0
Sam Houston State University	362	362	0	0
Southern Methodist University	815	310	505	0
Southwest Texas State University	710	600	0	110
St Mary's University of San Antonio	45	0	45	0
Stephen F. Austin State University	201	201	0	0
Sul Ross State University	43	43	0	0
Tarleton State University	47	47	0	0
Texas A & I University	351	171	180	0
Texas A & M University	5,009	3,363	1,631	15
Texas Christian University	143	124	0	19
Texas College of Osteopathic Medicine	89	0	0	89
Texas Southern University	240	240	0	0
Texas Tech University	1,464	1,009	362	93
Texas Woman's University	1,609	510	0	1,099
The University of Texas - Pan American	12	12	0	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Texas, continued				
Trinity University	118	20	0	98
Univ of Texas Hlth Sci Ctr San Antonio	500	133	0	367
Univ of Texas Hlth Sci Ctr at Houston	962	428	0	534
Univ of Texas MD Anderson Cancer Center	0	0	0	0
Univ of Texas Med Branch at Galveston	355	128	0	227
Univ of Texas SW Medical Ctr at Dallas	355	259	25	71
Univ of Texas at Arlington	2,087	918	947	222
Univ of Texas at Austin	4,971	2,538	2,021	412
Univ of Texas at Dallas	1,195	786	240	169
Univ of Texas at El Paso	799	363	293	143
University of Central Texas	197	197	0	0
University of Houston - Victoria	27	27	0	0
University of Houston at Clear Lake Cit	1,287	1,097	135	55
University of Houston-University Park	3,209	1,724	1,321	164
University of North Texas	1,152	1,009	34	109
University of Texas at San Antonio	310	225	85	0
University of Texas at Tyler	220	187	0	33
University of Texas of the Permian Basi	57	56	1	0
West Texas State University	231	146	15	70
Mountain	29,434	18,968	7,557	2,909
Arizona	7,648	4,857	2,145	646
Arizona State University	3,318	1,686	1,392	240
Northern Arizona University	939	783	0	156
University of Arizona	3,391	2,388	753	250
Colorado	9,350	5,716	2,526	1,108
Colorado School of Mines	781	553	228	0
Colorado State University	2,010	1,353	440	217
National Technological University	657	150	507	0
University of Colorado	4,544	2,542	1,343	659
University of Denver	991	936	8	47
University of Northern Colorado	367	182	0	185
Idaho	1,512	961	371	180
Idaho State University	444	233	31	180
University of Idaho	1,068	728	340	0
Montana	1,137	922	155	60
Montana College Mineral Sci & Technolog	91	9	64	18
Montana State University	521	393	91	37
University of Montana	525	520	0	5
Nevada	1,296	935	229	132
University of Nevada at Las Vegas	425	320	37	68
University of Nevada at Reno	871	615	192	64
New Mexico	3,176	2,129	851	196
Eastern New Mexico University	103	92	0	11
New Mexico Highlands University	54	54	0	0
New Mexico Institute of Mining and Tech	253	184	69	0
New Mexico State University	956	656	300	0
University of New Mexico	1,810	1,143	482	185
Utah	4,286	2,701	1,103	482
Brigham Young University	1,013	738	226	49
University of Utah	2,025	1,092	561	372
Utah State University	1,248	871	316	61
Wyoming	1,029	747	177	105
University of Wyoming	1,029	747	177	105
Pacific	73,975	47,670	18,190	8,115
Alaska	690	451	211	28
University of Alaska Southeast	26	26	0	0
University of Alaska at Anchorage	184	54	102	28
University of Alaska at Fairbanks	480	371	109	0
California	60,097	38,083	15,348	6,666
Azusa Pacific University	269	174	0	95
Biola University	188	188	0	0
Calif Poly State Univ at San Luis Obisp	404	279	125	0

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi- neering, total	Health fields
California, continued				
Calif Sch of Prof Psych - Fresno	366	366	0	0
Calif Sch of Prof Psych - Los Angeles	534	534	0	0
Calif Sch of Prof Psych - San Diego	617	617	0	0
Calif Sch of Prof Psych-Berkeley/Alamed	519	519	0	0
Calif State Polytechnic Univ at Pomona	417	291	126	0
Calif State Univ at Dominguez Hills	486	396	90	0
Calif State Univ at Fullerton	1,125	806	248	71
Calif State Univ at Hayward	906	840	0	66
Calif State Univ at Long Beach	2,236	1,226	719	291
Calif State Univ at Los Angeles	1,114	663	186	265
Calif State Univ at San Bernardino	218	189	0	29
Calif State Univ of Stanislaus	153	153	0	0
Calif State University at Chico	504	434	15	55
Calif State University at Fresno	816	668	36	112
Calif State University at Northridge	1,680	701	640	339
Calif State University at Sacramento	896	532	223	141
California Institute of Integral Studie	362	362	0	0
California Institute of Technology	1,125	698	427	0
California State Univ - Bakersfield	182	140	0	42
Chapman University	199	152	0	47
Charles R. Drew Univ of Medicine & Sci	0	0	0	0
Claremont Univ Center & Graduate School	552	552	0	0
Dominican College of San Rafael	109	109	0	0
Fuller Theological Seminary	343	343	0	0
Golden Gate University	192	192	0	0
Harvey Mudd College	6	0	6	0
Humboldt State University	330	271	54	5
John F Kennedy University	850	825	0	25
Loma Linda University	468	105	0	363
Loyola Marymount University	207	150	57	0
National University	767	567	200	0
Occidental College	1	1	0	0
Pacific Grad School of Prof Psych	341	341	0	0
Pacific States University	25	2	23	0
Pepperdine University	935	935	0	0
Rand Graduate School of Policy Studies	60	60	0	0
San Diego State University	2,166	1,243	286	637
San Francisco State University	1,292	905	0	387
San Jose State University	2,151	1,041	847	263
Santa Clara University	1,222	584	638	0
Sonoma State University	226	156	0	70
Stanford University	4,422	2,007	2,330	85
The Fielding Institute	478	478	0	0
The Wright Institute	199	199	0	0
US International University	492	492	0	0
US Naval Postgraduate School	1,340	541	799	0
University of Calif at Berkeley	4,979	2,946	1,570	463
University of Calif at Davis	2,579	1,963	606	10
University of Calif at Irvine	1,344	947	359	38
University of Calif at Los Angeles	4,171	2,428	783	960
University of Calif at Riverside	733	733	0	0
University of Calif at San Diego	1,902	1,392	412	98
University of Calif at San Francisco	1,034	275	23	736
University of Calif at Santa Barbara	1,530	1,008	474	48
University of Calif at Santa Cruz	628	584	44	0
University of La Verne	320	125	0	195
University of Redlands	51	0	0	51
University of San Diego	188	42	0	146
University of San Francisco	191	63	88	40
University of Southern California	5,575	2,450	2,727	398

See explanatory information, if any, and SOURCE(S) at end of table.

Table 22. Graduate students in the science, engineering, and health fields in all institutions, by geographic division, State, institution, and area of study: 1991

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Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
California, continued				
University of the Pacific	154	54	5	95
West Coast University	228	46	182	0
Hawaii	2,092	1,507	216	369
University of Hawaii at Manoa	2,092	1,507	216	369
Oregon	4,181	3,095	862	224
Oregon Grad Inst of Science & Technolog	213	142	71	0
Oregon Health Sciences University	119	118	0	1
Oregon State University	1,861	1,262	497	102
Pacific University	9	0	0	9
Portland State University	1,051	693	275	83
Southern Oregon State College	50	50	0	0
University of Oregon	830	830	0	0
University of Portland	48	0	19	29
Washington	6,915	4,534	1,553	828
Central Washington University	132	132	0	0
Eastern Washington University	297	257	0	40
Gonzaga University	9	0	9	0
Pacific Lutheran University	81	57	0	24
Saint Martin's College	30	0	30	0
Seattle University	239	125	114	0
University of Washington	4,454	2,738	1,138	578
Walla Walla College	5	5	0	0
Washington State University	1,353	981	262	110
Western Washington University	300	239	0	61
Whitworth College	15	0	0	15
Outlying Areas	2,841	1,852	168	821
Guam	12	12	0	0
University of Guam	12	12	0	0
Puerto Rico	2,829	1,840	168	821
Caribbean Center for Advanced Studies	386	386	0	0
Catholic University of Puerto Rico	52	0	0	52
Ponce School of Medicine	15	15	0	0
University of Puerto Rico	439	271	168	0
University of Puerto Rico - Rio Piedras	1,213	1,055	0	158
University of Puerto Rico Med Sci Campu	724	113	0	611

NOTE: Includes medical schools

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

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Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
Total, all institutions	344,655	353,696	364,234	368,358	373,909	379,521	384,911	411,296
1 University of Wisconsin - Madison	5,346	5,181	5,169	5,220	5,335	5,506	5,443	5,914
2 University of Minnesota	5,223	5,595	5,524	5,320	5,479	5,607	5,579	5,720
3 University of Southern California	7,046	8,051	7,866	7,474	7,034	6,397	5,679	5,575
4 Ohio State University	4,575	4,739	5,050	5,088	4,984	4,926	5,080	5,439
5 University of Michigan	4,455	4,557	4,672	4,882	4,883	5,079	5,066	5,252
6 Texas A & M University	3,929	3,795	4,019	4,194	4,409	4,635	4,927	5,009
7 University of Calif at Berkeley	5,300	5,207	5,297	5,337	5,099	5,057	5,202	4,979
8 Univ of Texas at Austin	4,464	4,328	4,390	4,390	4,420	4,436	4,717	4,971
9 University of Illinois at Urbana	4,153	4,470	4,693	4,854	4,805	4,842	4,945	4,938
10 University of Colorado	3,025	2,929	3,378	3,617	3,598	3,551	3,873	4,544
Total, 1st 10 insts.	47,516	48,852	50,058	50,376	50,046	50,036	50,511	52,341
11 George Washington University	3,666	3,532	4,372	4,609	4,623	4,190	4,425	4,544
12 University of Washington	4,111	4,187	4,072	4,084	4,201	4,128	4,290	4,454
13 Stanford University	4,134	4,135	4,043	4,131	4,144	4,165	4,263	4,422
14 Pennsylvania State University	3,626	3,781	4,129	4,046	4,245	4,348	4,140	4,419
15 Rutgers the State University	3,985	3,894	4,163	4,036	4,018	3,928	4,178	4,375
16 Massachusetts Institute of Technology	3,996	4,045	4,065	3,962	3,951	4,165	4,207	4,243
17 University of Calif at Los Angeles	3,692	3,840	3,792	4,027	4,117	4,168	3,857	4,171
18 Indiana University	2,411	1,869	2,513	2,630	2,659	3,473	3,933	4,135
19 Purdue University	3,556	3,622	3,725	3,851	4,058	4,040	3,915	4,022
20 University of Pittsburgh	4,203	3,858	3,756	3,819	3,679	3,635	3,852	3,944
Total, 1st 20 insts.	84,896	85,615	88,688	89,571	89,741	90,276	91,571	95,070
21 University of Maryland - College Park	3,333	3,439	3,515	3,592	3,684	3,860	3,931	3,876
22 University of Florida	3,049	3,244	3,305	2,974	3,042	3,097	3,588	3,741
23 Harvard University	3,013	3,216	3,266	2,975	3,163	3,069	2,602	3,472
24 Cornell University	3,007	3,103	3,361	3,365	3,386	3,416	3,408	3,453
25 SUNY - Buffalo	2,838	2,738	2,823	3,063	3,150	3,125	2,974	3,445
26 University of Arizona	3,435	3,582	3,752	3,631	3,629	3,474	3,377	3,391
27 University of Illinois at Chicago	2,708	2,638	2,813	2,728	2,835	3,074	3,121	3,355
28 Georgia Institute of Technology	2,339	2,271	2,554	2,666	2,677	2,766	2,972	3,326
29 Arizona State University	2,219	2,435	2,341	2,403	2,654	2,889	3,025	3,318
30 New York University	3,322	3,680	3,200	3,152	2,856	2,818	2,790	3,315
Total, 1st 30 insts.	114,159	115,961	119,618	120,120	120,817	121,864	123,359	129,762
31 University of Massachusetts	2,458	2,594	2,669	2,611	3,178	3,130	3,026	3,262
32 University of Houston-University Park	1,486	1,622	1,895	1,828	1,655	2,082	2,578	3,209
33 North Carolina State Univ at Raleigh	2,729	2,690	2,964	2,883	3,031	3,114	3,076	3,115
34 Virginia Polytechnic Inst and State Uni	2,710	3,377	3,377	3,324	2,991	3,122	3,161	3,113
35 Michigan State University	2,897	2,868	3,087	2,947	2,845	3,051	2,993	3,103
36 Univ of North Carolina at Chapel Hill	2,393	2,426	2,539	2,692	2,669	2,846	2,947	3,101
37 Wayne State University	2,255	2,333	2,151	2,139	2,289	2,930	3,155	3,056
38 Columbia University Main Division	3,020	3,065	3,126	2,990	2,895	2,945	2,889	2,964
39 Louisiana State University System	2,573	2,485	2,396	2,462	2,407	2,334	2,582	2,848
40 Iowa State University of Sci & Tech	2,491	2,578	2,619	2,659	2,714	2,680	2,755	2,818
Total, 1st 40 insts.	139,171	141,999	146,441	146,655	147,491	150,098	152,521	160,351
41 University of Tennessee at Knoxville	2,389	2,419	2,464	2,368	2,464	2,735	2,530	2,789
42 University of Cincinnati	2,406	2,364	2,389	2,368	2,421	2,422	2,371	2,721
43 Boston University	2,096	2,241	2,359	2,361	2,211	2,229	2,409	2,631
44 Northeastern University	2,825	2,699	2,598	2,435	2,359	2,241	2,258	2,581
45 University of Calif at Davis	2,571	2,662	2,744	2,608	2,587	2,668	2,717	2,579
46 University of Connecticut	1,966	2,025	2,163	2,270	2,282	2,290	2,227	2,551
47 University of Pennsylvania	2,436	2,523	2,510	2,437	2,415	2,521	2,526	2,533
48 University of Oklahoma	2,094	2,165	2,036	2,269	2,225	2,122	2,412	2,529
49 University of Iowa	1,927	1,972	2,084	2,068	2,171	2,140	2,301	2,420
50 SUNY - Stony Brook	1,998	2,026	2,109	2,194	2,321	2,290	2,019	2,406
Total, 1st 50 insts.	161,879	165,095	169,897	170,033	170,947	173,756	176,291	186,091
51 University of Kansas	2,215	2,124	2,049	2,041	2,091	2,191	2,257	2,403
52 University of South Florida	986	1,155	1,304	1,259	1,688	1,667	2,004	2,334
53 George Mason University	781	1,065	1,221	1,566	1,903	2,050	2,275	2,299
54 San Diego State University	1,586	1,885	1,893	1,992	1,960	2,013	2,037	2,166
55 Syracuse University	2,292	2,108	2,188	2,138	2,195	2,135	2,154	2,164
56 University of Hawaii at Manoa	1,702	1,705	1,820	1,822	1,829	1,857	1,981	2,092
57 Univ of Texas at Arlington	1,787	1,806	1,858	1,874	1,882	1,910	1,783	2,087
58 University of Massachusetts Lowell	1,738	1,805	1,932	2,020	2,088	1,582	2,059	2,049
59 Rensselaer Polytechnic Institute	1,822	1,761	1,841	1,778	1,668	1,795	1,852	2,036
60 Columbia University Teachers College	1,713	1,753	1,758	1,751	1,987	1,884	1,928	2,030
Total, 1st 60 insts.	178,501	182,262	187,761	188,274	190,238	192,840	196,621	207,751

See explanatory information, if any, and SOURCE(S) at end of table.

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
61 University of Utah	1,829	1,878	1,900	1,879	1,754	1,808	1,836	2,025
62 University of Kentucky	1,640	1,632	1,633	1,680	1,649	1,886	1,673	2,019
63 Colorado State University	1,734	1,722	1,756	1,804	1,870	1,864	1,870	2,010
64 Northwestern University	1,665	1,741	1,711	1,827	1,898	1,962	1,911	2,007
65 University of Missouri - Columbia	1,925	1,890	1,951	1,888	1,849	1,833	1,775	1,983
66 University of Virginia	1,631	1,763	1,848	1,874	1,846	1,698	1,853	1,943
67 University of Calif at San Diego	1,303	1,404	1,528	1,616	1,528	1,625	1,790	1,902
68 University of South Carolina	1,671	1,620	1,801	1,895	1,683	1,827	1,770	1,892
69 Johns Hopkins University	1,395	1,512	1,528	1,486	1,647	1,694	1,744	1,880
70 Oregon State University	1,732	1,673	1,797	1,779	1,740	1,722	1,765	1,861
Total, 1st 70 insts.	195,026	199,097	205,214	206,000	207,702	210,759	214,608	227,273
71 Yale University	1,577	1,791	1,841	1,926	1,938	1,930	1,918	1,861
72 Virginia Commonwealth University	974	998	1,168	1,301	1,412	1,498	1,759	1,853
73 New Jersey Institute of Technology	1,655	1,907	2,102	2,419	2,658	2,647	2,283	1,848
74 Auburn University	1,098	1,227	1,305	1,340	1,391	1,517	1,699	1,844
75 CUNY Graduate School and Univ Center	1,767	1,665	1,853	2,026	2,047	2,055	1,786	1,841
76 University of Chicago	1,427	1,505	1,625	1,741	1,757	1,969	2,016	1,830
77 University of Wisconsin - Milwaukee	1,620	1,628	1,630	1,691	1,698	1,709	1,594	1,827
78 Illinois Institute of Technology	1,745	1,781	1,583	1,632	1,654	1,510	1,776	1,818
79 Oklahoma State University	1,427	1,439	1,529	1,577	1,542	1,690	1,721	1,813
80 University of New Mexico	1,456	1,533	1,556	1,665	1,623	1,692	1,674	1,810
Total, 1st 80 insts.	209,772	214,569	221,404	223,318	225,422	228,976	232,834	245,618
81 Clemson University	1,173	1,224	1,311	1,333	1,396	1,451	1,500	1,795
82 University of Nebraska - Lincoln	1,431	1,359	1,351	1,407	1,415	1,457	1,558	1,756
83 Western Michigan University	1,282	1,253	1,345	1,540	1,392	1,342	1,479	1,691
84 Case Western Reserve University	1,848	1,921	1,947	2,236	1,769	1,692	1,793	1,669
85 Polytechnic University	1,743	1,929	2,324	2,066	2,028	2,050	1,974	1,667
86 University of Georgia	1,555	1,436	1,465	1,576	1,525	1,501	1,553	1,666
87 The American University	1,442	1,720	1,600	1,645	1,371	1,476	1,559	1,656
88 Carnegie-Mellon University	1,198	1,419	1,535	1,512	1,563	1,609	1,657	1,656
89 West Virginia University	1,498	1,412	1,339	1,242	1,352	1,396	1,522	1,643
90 Southern Illinois Univ at Carbondale	1,289	1,433	1,512	1,666	1,638	1,625	1,423	1,618
Total, 1st 90 insts.	224,231	229,675	237,133	239,541	240,871	244,575	248,852	262,435
91 Texas Woman's University	1,977	1,928	1,976	1,864	1,883	2,044	1,810	1,609
92 University of Akron	1,225	1,337	1,398	1,448	1,505	1,526	1,403	1,609
93 Antioch University	0	0	0	0	1,133	1,019	1,146	1,593
94 Temple University	1,242	1,242	1,108	1,203	1,237	1,355	1,375	1,592
95 Drexel University	1,208	1,336	1,362	1,391	1,318	1,276	1,410	1,566
96 Kansas State University	1,377	1,345	1,409	1,450	1,505	1,533	1,532	1,532
97 University of Calif at Santa Barbara	1,344	1,347	1,368	1,401	1,328	1,440	1,525	1,530
98 Washington University	1,038	1,080	1,200	1,325	1,377	1,437	1,593	1,510
99 Florida State University	1,112	1,137	1,190	1,110	1,219	1,425	1,483	1,503
100 De Paul University	969	1,159	1,191	1,295	1,273	1,400	1,358	1,489
Total, 1st 100 insts.	235,723	241,586	249,335	252,028	254,649	259,030	263,487	277,968
101 Texas Tech University	1,140	1,143	1,071	1,077	1,044	1,167	1,273	1,464
102 University of Delaware	1,112	1,150	1,189	1,303	1,198	1,179	1,148	1,447
103 The University of Alabama at Birmingham	897	980	1,120	1,270	1,387	1,449	1,126	1,446
104 University of Rochester	1,165	1,221	1,257	1,181	1,318	1,361	1,396	1,422
105 Duke University	976	1,060	1,166	1,216	1,283	1,299	1,388	1,412
106 University of Central Florida	971	1,062	1,113	1,151	1,052	1,047	1,198	1,403
107 Long Island University	1,996	1,500	1,655	1,534	1,515	1,245	1,490	1,403
108 SUNY - Albany	843	1,123	1,153	1,168	1,077	1,088	1,264	1,384
109 Princeton University	1,137	1,164	1,177	1,182	1,248	1,327	1,307	1,374
110 Washington State University	1,411	1,440	1,398	1,362	1,276	1,191	1,271	1,353
Total, 1st 110 insts.	247,371	253,429	261,634	264,472	267,047	271,383	276,346	292,076
111 University of Calif at Irvine	931	992	1,027	1,109	1,161	1,215	1,277	1,344
112 Stevens Institute of Technology	1,455	1,573	1,622	1,642	1,666	1,435	1,255	1,343
113 US Naval Postgraduate School	1,171	1,302	1,260	1,204	1,331	1,349	1,388	1,340
114 University of Rhode Island	1,091	1,126	1,196	1,286	1,217	1,278	1,116	1,339
115 University of Miami	1,024	1,106	1,080	1,174	1,196	1,157	1,180	1,289
116 University of Arkansas	984	971	943	958	858	857	911	1,269
117 Old Dominion University	931	906	950	986	1,091	1,104	1,197	1,267
118 CUNY City College	710	751	959	896	894	716	854	1,263
119 University of Missouri - Rolla	1,095	1,159	1,246	1,282	1,239	1,231	1,224	1,261
120 Utah State University	1,207	1,078	1,207	1,163	1,213	1,247	1,234	1,248
Total, 1st 120 insts.	257,970	264,393	273,124	276,172	278,913	282,972	287,982	305,039

See explanatory information, if any, and SOURCE(S) at end of table.

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

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Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
121 Tulane University of Louisiana	850	893	905	893	931	947	1,009	1,232
122 Northern Illinois University	830	829	883	905	973	977	1,167	1,231
123 Santa Clara University	1,422	1,580	1,665	1,619	1,642	1,494	1,293	1,222
124 SUNY - Binghamton	1,137	1,159	1,131	1,106	1,161	1,199	1,182	1,214
125 University of Puerto Rico - Rio Piedras	1,239	1,263	1,265	1,135	1,041	1,097	1,235	1,213
126 Univ of Texas at Dallas	898	946	963	975	1,088	1,169	1,179	1,195
127 Cleveland State University	993	989	940	1,008	1,104	1,060	1,125	1,179
128 Mississippi State University	1,014	949	927	1,044	1,075	1,090	1,087	1,161
129 University of Louisville	1,053	966	977	1,038	1,126	1,141	1,115	1,156
130 University of North Texas	1,400	1,244	1,202	1,158	1,218	1,221	1,206	1,152
Total, 1st 130 insts.	268,806	275,211	283,982	287,053	290,272	294,367	299,580	316,994
131 Georgia State University	1,025	884	926	928	984	1,068	943	1,149
132 Pace University	1,153	1,079	1,375	1,181	1,121	1,155	990	1,144
133 Wright State University	701	743	759	861	921	961	993	1,144
134 California Institute of Technology	995	998	992	965	1,010	1,065	1,088	1,125
135 University of Maryland - Balt Prof Sch	743	716	819	812	827	921	965	1,069
136 University of Idaho	776	775	778	837	887	960	1,048	1,068
137 Kent State University	842	880	899	901	911	961	1,029	1,059
138 The University of Alabama in Huntsville	517	609	627	742	826	940	970	1,051
139 Portland State University	573	630	676	692	778	815	892	1,051
140 Tufts University	668	765	744	854	982	1,002	996	1,044
Total, 1st 140 insts.	276,799	283,290	292,577	295,826	299,519	304,215	309,494	327,898
141 University of Calif at San Francisco	856	873	940	985	1,024	1,028	1,025	1,034
142 University of Wyoming	779	813	760	759	717	802	715	1,029
143 Florida Institute of Technology	954	1,025	1,053	1,103	999	1,024	894	1,028
144 University of Maryland - Baltimore Cnty	396	419	563	507	831	835	913	1,026
145 Lehigh University	932	964	1,017	944	974	1,018	764	1,022
146 Vanderbilt University	709	753	739	795	839	1,001	996	1,016
147 Ohio University	1,007	897	930	998	1,000	986	388	1,014
148 Brigham Young University	885	1,030	1,047	1,001	829	673	630	1,013
149 Fairleigh Dickinson University	1,241	1,252	794	1,027	993	859	912	1,005
150 University of Denver	771	731	663	652	691	644	981	991
Total, 1st 150 insts.	285,329	292,047	301,083	304,597	308,416	313,085	317,712	338,076
151 Emory University	709	704	743	752	769	852	1,013	986
152 Univ of Texas Hlth Sci Ctr at Houston	670	655	690	703	749	832	919	962
153 Villanova University	982	1,001	1,061	979	958	902	844	959
154 New Mexico State University	792	793	843	900	903	856	883	956
155 Memphis State University	865	943	979	820	846	888	896	952
156 Wichita State University	775	756	772	896	905	881	810	945
157 Nova University	476	720	436	1,260	1,202	1,143	923	940
158 Northern Arizona University	558	726	612	689	729	804	953	939
159 The University of Alabama	641	682	734	775	714	768	757	901
160 University of Dayton	576	654	806	947	830	775	763	896
Total, 1st 160 insts.	292,373	299,681	308,759	313,318	317,021	321,796	326,473	347,512
161 Florida International University	0	0	0	0	580	703	771	893
162 New York Institute of Technology	949	898	928	884	948	961	939	887
163 Catholic University of America	1,081	1,081	1,037	1,032	980	916	940	883
164 Worcester Polytechnic Institute	652	708	773	606	732	707	748	882
165 University of Nevada at Reno	561	557	515	619	656	721	841	871
166 St. Louis University	817	776	779	744	777	622	613	870
167 Florida Atlantic University	438	446	475	499	512	490	742	860
168 New School for Social Research	1,328	1,273	1,135	555	1,080	1,066	984	848
169 University of Oregon	762	757	740	754	794	776	776	830
170 Rice University	740	757	795	840	750	789	800	825
Total, 1st 170 insts.	299,701	306,934	315,936	319,851	324,830	329,537	334,627	356,161
171 University of Notre Dame	672	667	658	672	755	756	807	822
172 Southern Methodist University	802	736	770	895	974	952	848	815
173 Marquette University	631	708	764	828	819	814	707	808
174 University of Mississippi	580	566	640	601	709	750	739	805
175 Univ of Texas at El Paso	777	737	676	703	738	701	766	799
176 Adelphi University	1,067	1,012	971	519	491	545	948	798
177 University of Missouri - Kansas City	518	629	718	866	745	768	645	790
178 Colorado School of Mines	442	616	803	774	700	679	644	781
179 Howard University	1,059	947	842	896	868	751	781	778
180 Brown University	743	757	797	788	801	785	769	761
Total, 1st 180 insts.	306,992	314,309	323,575	327,393	332,430	337,038	342,281	364,118

See explanatory information, if any, and SOURCE(S) at end of table.

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

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Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
181 Loyola University of Chicago	625	562	561	580	587	608	570	755
182 University of Toledo	765	786	729	726	583	666	700	751
183 Oakland University	478	559	602	622	652	701	668	750
184 Georgetown University	874	1,251	1,259	1,022	884	886	590	750
185 CUNY Hunter College	833	913	843	786	774	573	644	749
186 University of Calif at Riverside	732	769	727	735	701	672	711	733
187 University of Puerto Rico Med Sci Campu	404	453	411	403	558	601	524	724
188 University of Maine	580	523	538	614	649	667	660	711
189 St John's University	627	586	677	620	620	628	692	705
190 University of New Hampshire	518	551	570	548	599	603	674	697
Total, 1st 190 insts.	313,428	321,262	330,492	334,049	339,037	343,643	348,714	371,443
191 Boston College	498	511	523	521	538	614	623	678
192 University of Detroit	530	503	540	579	526	588	564	668
193 University of Vermont & St Agric Colleg	659	616	630	605	650	618	625	648
194 Yeshiva University	552	599	561	586	600	666	590	632
195 South Dakota State University	386	432	431	431	429	441	493	629
196 University of Calif at Santa Cruz	403	433	455	462	455	555	608	628
197 Calif Sch of Prof Psych - San Diego	389	401	415	430	434	480	519	617
198 North Dakota State University	555	589	614	574	620	615	560	615
199 University of Southwestern Louisiana	684	693	633	560	490	534	538	607
200 Bowling Green State University	515	487	509	536	589	596	581	600
Total, 1st 200 insts.	318,599	326,526	335,803	339,333	344,368	349,350	354,415	377,765
201 Fordham University	633	598	480	543	461	470	566	598
202 Air Force Institute of Technology	639	551	524	580	596	548	653	589
203 Univ of North Carolina at Greensboro	517	503	500	494	451	447	512	585
204 University of Southern Mississippi	606	657	683	610	605	661	540	584
205 Hahnemann University	284	282	391	394	494	406	506	572
206 Illinois State University	442	465	449	541	557	567	523	570
207 Union Institute	293	444	470	476	471	488	501	556
208 Claremont Univ Center & Graduate School	205	207	448	480	517	502	511	552
209 Seton Hall University	319	322	300	297	313	278	278	540
210 Calif Sch of Prof Psych - Los Angeles	330	424	428	438	452	501	585	534
Total, 1st 210 insts.	322,867	330,979	340,476	344,186	349,285	354,218	359,590	383,445
211 University of Montana	537	470	435	430	421	456	497	525
212 Montana State University	493	510	476	461	520	515	460	521
213 Calif Sch of Prof Psych-Berkeley/Alamed	361	391	426	423	455	501	512	519
214 University of South Alabama	229	261	305	345	392	453	494	515
215 Lamar University	334	304	330	282	303	320	339	512
216 Hofstra University	350	516	507	553	580	599	549	508
217 Baylor University	254	304	289	289	334	422	474	504
218 Univ of Texas Hlth Sci Ctr San Antonio	281	277	292	302	309	427	108	500
219 US International University	513	540	630	613	547	497	519	492
220 Miami University	494	521	505	546	477	454	437	485
Total, 1st 220 insts.	326,713	335,073	344,671	348,430	353,623	358,862	363,979	388,526
221 Michigan Technological University	350	334	383	398	417	442	464	483
222 University of Alaska at Fairbanks	352	381	399	387	404	444	487	480
223 Rush University	330	342	376	394	434	487	471	479
224 The Fielding Institute	436	449	447	471	434	470	473	478
225 Loma Linda University	512	649	537	453	489	464	459	468
226 Idaho State University	232	266	257	336	338	388	462	444
227 University of Puerto Rico	395	415	427	397	374	364	358	439
228 Ball State University	518	473	477	573	328	333	421	429
229 Brandeis University	314	311	342	366	375	392	416	428
230 SUNY - Coll of Env Science and Forestry	348	356	381	355	377	420	455	427
Total, 1st 230 insts.	330,500	339,049	348,697	352,560	357,593	363,066	368,445	393,081
231 East Carolina University	448	374	373	354	364	382	363	402
232 Duquesne University	303	283	306	315	299	314	380	401
233 East Tennessee State University	193	206	241	262	356	318	343	390
234 Caribbean Center for Advanced Studies	347	373	371	248	237	213	216	386
235 Indiana State University	282	282	297	311	302	335	280	372
236 College of William and Mary	291	293	314	303	310	302	334	371
237 University of Northern Colorado	133	192	456	552	419	262	339	367
238 Calif Sch of Prof Psych - Fresno	195	166	194	202	207	235	251	366
239 California Institute of Integral Studie	89	184	208	240	247	300	250	362
240 Dartmouth College	285	293	308	298	339	352	339	362
Total, 1st 240 insts.	333,066	341,695	351,765	355,645	360,673	366,079	371,540	396,860

See explanatory information, if any, and SOURCE(S) at end of table.

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
241 Sam Houston State University	373	352	376	391	373	328	343	362
242 Univ of Texas Med Branch at Galveston	186	198	235	248	213	231	162	355
243 Univ of Texas SW Medical Ctr at Dallas	260	265	276	257	298	317	320	355
244 East Texas State University	505	501	481	36	348	377	363	346
245 Fuller Theological Seminary	180	176	186	245	280	295	338	343
246 Pacific Grad School of Prof Psych	172	182	213	246	0	347	368	341
247 Central Michigan University	393	397	399	363	316	312	298	335
248 Tennessee Technological University	185	193	233	267	264	285	284	323
249 Baylor College of Medicine	149	162	182	197	224	266	285	303
250 Louisiana Tech University	267	290	279	242	227	263	230	301
Total, 1st 250 insts.	335,736	344,411	354,625	358,137	363,216	369,100	374,531	400,224
251 University of North Dakota	351	360	356	341	327	332	326	301
252 Univ of Med and Dent of New Jersey	209	210	219	240	282	252	266	291
253 Medical College of Ohio at Toledo	42	171	162	214	222	255	167	290
254 Clarkson University	337	343	348	319	320	308	312	286
255 Andrews University	0	0	0	0	181	189	275	283
256 Clark Atlanta University	0	0	0	0	0	312	279	282
257 University of Missouri - St Louis	284	274	323	303	309	313	316	281
258 University of Tulsa	253	286	290	325	300	257	260	280
259 Clark University	217	237	238	225	237	238	253	275
260 South Dakota School of Mines and Tech	228	209	202	232	236	274	234	274
Total, 1st 260 insts.	337,657	346,501	356,763	360,336	365,630	371,830	377,219	403,067
261 University of Nebraska Medical Center	255	218	186	207	225	263	277	272
262 Thomas Jefferson University	71	72	74	115	118	137	158	269
263 Marshall University	155	203	236	244	236	216	237	261
264 New Mexico Institute of Mining and Tech	216	225	248	250	234	217	245	253
265 Wake Forest University	175	181	178	160	179	206	219	241
266 University of South Dakota	162	167	185	193	186	200	260	236
267 University of Arkansas - Med Sci Campus	198	210	218	222	195	172	197	226
268 University of Tennessee, Memphis	144	142	160	182	194	207	215	213
269 Oregon Grad Inst of Science & Technolog	122	146	152	155	178	148	188	213
270 Forest Institute of Prof Psych	146	154	190	251	254	260	256	206
Total, 1st 270 insts.	339,301	348,219	358,590	362,315	367,629	373,856	379,471	405,457
271 New York Medical College	359	380	344	386	391	290	257	203
272 Stephen F. Austin State University	313	269	274	237	206	205	200	201
273 Medical College of Georgia	151	175	182	196	200	214	101	200
274 Northeast Louisiana University	190	187	175	185	186	188	195	200
275 The Wright Institute	184	145	154	154	161	174	207	199
276 Golden Gate University	775	691	593	847	754	618	354	192
277 Biola University	124	171	168	160	166	173	190	188
278 Florida A & M University	57	66	63	65	135	130	128	182
279 Medical University of South Carolina	81	87	111	85	88	108	164	167
280 CUNY Mt. Sinai Sch of Medicine	0	0	0	115	130	135	146	164
Total, 1st 280 insts.	341,535	350,390	360,654	364,745	370,046	376,091	381,413	407,353
281 Bryn Mawr College	167	152	138	133	127	116	114	154
282 University of the Pacific	92	87	124	141	165	156	144	154
283 Texas Christian University	145	140	136	133	135	143	153	143
284 Indiana University of Pennsylvania	0	0	0	0	63	103	123	140
285 Union College(NY)	204	251	311	209	175	133	144	140
286 Spalding University	144	138	132	167	167	151	112	140
287 Xavier University	0	0	0	0	0	76	76	135
288 Chicago School of Prof Psych.	131	100	103	130	176	144	158	134
289 University of Health Sciences (Chicago)	87	84	139	119	148	117	119	131
290 Rockefeller University	117	115	121	117	117	121	128	128
Total, 1st 290 insts.	342,622	351,457	361,858	365,894	371,319	377,351	382,684	408,752
291 Wesleyan University	105	114	117	121	121	115	121	128
292 Mayo Graduate School	32	46	46	53	55	74	98	120
293 Oregon Health Sciences University	45	56	64	74	90	88	25	119
294 Eastern Virginia Medical School	69	74	71	73	78	70	111	118
295 Uniformed Serv Univ of the Hlth Science	94	99	100	108	116	126	123	118
296 University of Northern Iowa	99	101	107	91	89	83	102	117
297 Creighton University	56	144	139	150	165	136	76	116
298 Mercer University	0	0	0	107	136	144	88	116
299 SUNY - Health Sci Ctr at Brooklyn	80	79	80	83	93	100	108	115
300 Alfred University	130	122	184	161	124	143	139	115
Total, 1st 300 insts.	343,332	352,292	362,766	366,915	372,386	378,430	383,675	407,934

See explanatory information, if any, and SOURCE(S) at end of table.

Table 23. Graduate science and engineering students in doctorate-granting institutions, ranked by 1991 total graduate science and engineering students: 1984-91

Institutional ranking	1984	1985	1986	1987	1988	1989	1990	1991
301 The Medical College of Pennsylvania	67	69	60	90	86	92	100	109
302 University of Maryland Eastern Shore	0	0	0	0	39	62	82	104
303 Medical College of Wisconsin	53	57	68	61	60	84	91	102
304 Texas College of Osteopathic Medicine	35	51	58	60	59	70	79	89
305 Albany Medical College Grad Studies Pro	70	77	92	93	110	100	86	87
306 SUNY - Health Sci Ctr at Syracuse	53	43	47	57	55	60	51	82
307 Maharishi International University	0	0	0	0	31	68	77	78
308 Univ. of Osteopathic Med & Health Sci	0	0	0	3	0	0	68	74
309 Emerson College	0	0	0	0	69	74	58	72
310 Institute of Paper Science & Technology	100	99	91	95	69	45	57	70
Total, 1st 310 insts.	343,710	352,688	363,182	367,371	372,964	379,085	384,424	410,801
311 CUNY Herbert H. Lehman College	56	54	113	73	75	75	78	61
312 Rand Graduate School of Policy Studies	57	60	62	70	60	60	48	60
313 Philadelphia Coll of Pharmacy and Sci	36	53	58	55	52	46	61	60
314 Meharry Medical College	37	41	32	34	36	35	47	54
315 Catholic University of Puerto Rico	51	48	46	58	0	0	54	52
316 Baylor College of Dentistry	58	58	46	52	56	57	47	48
317 Mass College of Pharmacy/Allied Health	56	65	65	40	47	39	41	46
318 University of New England	0	0	0	0	0	0	29	41
319 Institute of Textile Technology	16	16	28	31	35	30	30	30
320 SUNY State College of Optometry	7	15	14	19	33	33	28	22
Total, 1st 320 insts.	344,084	353,098	363,646	367,803	373,358	379,460	384,887	411,275
321 Ponce School of Medicine	0	0	0	0	21	22	19	15
322 Smith College	4	4	4	4	5	6	5	6
323 University of New Orleans	0	0	0	0	0	0	0	0
324 University of Massachusetts at Worceste	0	0	0	0	0	0	0	0
325 University of Dallas	0	0	0	0	0	0	0	0
326 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0	0
327 Rosemead Graduate School of Psychology	0	0	0	0	0	0	0	0
328 Phila College of Osteopathic Medicine	8	9	0	0	0	0	0	0
329 Desert Research Institute	0	0	0	0	0	0	0	0
330 Mead University	0	0	0	0	0	0	0	0
Total, 1st 330 insts.	344,096	353,111	363,650	367,807	373,384	379,488	384,911	411,296
331 George Peabody College for Teachers	0	0	0	0	0	0	0	0
332 University of Oklahoma - Norman	0	0	0	0	0	0	0	0
333 Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0	0
334 NE Ohio Univ Med School	0	0	0	0	0	0	0	0
335 Univ of Illinois Med Center - Chicago	0	0	0	0	0	0	0	0
336 Oral Roberts University	39	34	27	25	23	33	0	0
337 Univ of Health Sciences (Kansas City)	0	0	0	0	0	0	0	0
338 Coll of Osteopathic Med of the Pacific	0	0	0	0	0	0	0	0
339 Woods Hole Oceanographic Institution	106	112	125	120	113	0	0	0
340 Providence College	0	0	0	0	0	0	0	0
Total, 1st 340 insts.	344,241	353,257	363,802	367,952	373,520	379,521	384,911	411,296
341 University of Oklahoma Health Sci Cente	0	0	0	0	0	0	0	0
342 Atlanta University	411	436	425	406	389	0	0	0
343 Oklahoma Coll of Osteo Med & Surgery	0	0	0	0	0	0	0	0
344 Morehouse School of Medicine	0	0	0	0	0	0	0	0
345 Kirksville College of Osteopathic Med	3	3	7	0	0	0	0	0
346 University of Massachusetts at Amherst	0	0	0	0	0	0	0	0
347 West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0	0
348 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
Total, 1st 348 insts.	344,655	353,696	364,234	368,358	373,909	379,521	384,911	411,296

NOTE: Includes medical schools

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 24. Science and engineering postdoctoral appointees in doctorate-granting institutions by field and source of support, and number of postdoctoral appointees who were non-U.S. citizens: 1991

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Field	Total	Source of support					Number of post-doctoral appointees who were not U.S citizens
		Federal				Non-Federal	
		Total	Fellowships	Trainee-ships	Research grants		
Total, all surveyed fields	31,553	21,876	2,912	2,856	16,108	9,677	15,963
Total, science/engineering fields	23,018	16,949	1,903	1,253	13,793	6,069	12,116
Engineering, total	2,237	1,488	65	25	1,398	749	1,630
Aerospace	77	55	0	0	55	22	48
Agricultural	33	18	1	0	17	15	17
Biomedical	66	53	10	8	35	13	41
Chemical	578	323	7	3	313	255	450
Civil	185	131	6	0	125	54	116
Electrical	300	202	6	3	193	98	232
Engineering science	117	93	9	0	84	24	68
Industrial	27	10	1	0	9	17	18
Mechanical	329	237	23	7	207	92	228
Metallurgical/materials	401	273	2	2	269	128	321
Mining	11	8	0	0	8	3	11
Nuclear	29	22	0	0	22	7	21
Petroleum	18	16	0	0	16	2	14
Engineering, n.e.c.	66	47	0	2	45	19	45
Sciences, total	20,781	15,461	1,838	1,228	12,395	5,320	10,486
Physical sciences	5,623	4,457	286	27	4,144	1,166	3,439
Astronomy	210	198	28	0	170	12	84
Chemistry	3,627	2,776	212	23	2,541	851	2,336
Physics	1,763	1,467	46	4	1,417	296	1,006
Physical sciences, n.e.c.	23	16	0	0	16	7	13
Earth, atmospheric, and ocean sciences	645	505	34	2	469	140	236
Atmospheric sciences	59	48	1	0	47	11	31
Geosciences	391	287	10	0	277	104	141
Oceanography	161	144	16	0	128	17	51
Earth, atmos., and ocean sci., n.e.c.	34	26	7	2	17	8	13
Mathematical sciences	206	143	27	3	113	63	114
Computer sciences	157	117	4	0	113	40	47
Agricultural sciences	574	370	29	1	340	204	247
Biological sciences	12,648	9,317	1,364	1,064	6,889	3,331	6,155
Anatomy	521	423	61	45	317	98	267
Biochemistry	2,123	1,615	213	111	1,291	508	1,150
Biology	1,398	1,139	197	48	894	259	615
Biometry/epidemiology	95	75	17	42	16	20	32
Biophysics	156	105	8	6	91	51	84
Botany	475	352	42	0	310	123	204
Cell biology	1,282	901	184	63	654	381	582
Ecology	49	37	3	0	34	12	16
Entomology/parasitology	236	164	6	2	156	72	85
Genetics	676	441	95	69	277	235	290
Microbiology	1,802	1,291	180	191	920	511	865
Nutrition	175	90	10	8	72	85	109
Pathology	1,092	686	79	154	453	406	506
Pharmacology	1,153	911	108	159	644	242	645
Physiology	1,057	792	131	123	538	265	535
Zoology	163	129	20	7	102	34	63
Biosciences, n.e.c.	195	166	10	36	120	29	107
Psychology	503	365	46	102	217	138	101
Social sciences	425	187	48	29	110	238	147
Agricultural economics	64	41	4	2	35	23	30
Anthropology	50	19	3	1	15	31	6
Economics (except agricultural)	40	1	1	0	0	39	26
Geography	25	14	3	0	11	11	7
History and philosophy of science	19	7	4	0	3	12	7
Linguistics	14	8	1	1	6	6	3
Political science	84	27	16	1	10	57	37
Sociology	99	52	14	24	14	47	25
Sociology/anthropology	1	0	0	0	0	1	0
Social sciences, n.e.c.	29	18	2	0	16	11	6
Total, health fields	8,535	4,927	1,009	1,603	2,315	3,608	3,847
Dentistry	117	68	42	11	15	49	58
Neurology	598	370	74	100	196	228	294
Nursing	28	26	11	11	4	2	0
Pharmaceutical sciences	482	341	29	10	302	141	304
Preventive medicine/community health	228	164	39	49	76	64	75
Speech pathology/audiology	41	38	7	7	24	3	12
Veterinary sciences	126	71	9	12	50	55	47
Clinical medicine, n.e.c.	6,813	3,798	784	1,382	1,632	3,015	3,036
Health related, n.e.c.	102	51	14	21	16	51	21

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

Table 25. Science and engineering postdoctoral appointees in doctorate-granting institutions, by field: 1983-91

Page 1 of 1

Field	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total, all surveyed fields	20,719	21,522	22,408	23,749	24,831	26,141	28,059	29,111	31,553
Total, science/engineering fields	15,657	16,168	16,920	17,901	18,760	19,759	20,962	21,604	23,018
Engineering, total	1,101	1,194	1,347	1,396	1,441	1,684	1,908	1,943	2,237
Aerospace	32	42	51	48	43	48	38	67	77
Agricultural	4	8	15	17	29	31	38	31	33
Biomedical	28	34	47	52	44	47	67	71	66
Chemical	198	245	273	295	309	423	466	551	578
Civil	131	146	122	140	175	203	182	168	185
Electrical	174	171	176	172	175	186	193	241	300
Engineering science	71	63	90	67	41	38	74	76	117
Industrial	13	21	18	25	26	32	32	6	27
Mechanical	182	196	207	239	216	216	302	218	329
Metallurgical/materials	204	168	245	250	283	325	323	370	401
Mining	19	18	19	25	26	63	90	19	11
Nuclear	15	19	31	31	20	17	36	30	29
Petroleum	1	4	6	1	10	8	9	12	18
Engineering, n.e.c.	29	59	47	34	44	47	58	83	66
Sciences, total	14,556	14,974	15,573	16,505	17,319	18,075	19,054	19,661	20,781
Physical sciences	4,444	4,386	4,517	4,843	4,953	5,187	5,355	5,507	5,623
Astronomy	111	118	138	133	125	147	186	184	210
Chemistry	2,973	2,906	2,995	3,151	3,246	3,429	3,462	3,580	3,627
Physics	1,350	1,320	1,342	1,527	1,548	1,578	1,678	1,715	1,763
Physical sciences, n.e.c.	10	42	42	32	34	33	29	28	23
Earth, atmospheric, and ocean sciences	415	488	375	417	420	499	459	605	645
Atmospheric sciences	41	74	48	43	58	71	58	57	59
Geosciences	237	250	226	247	239	279	274	359	391
Oceanography	120	151	79	98	81	116	107	168	161
Earth, atmos., and ocean sci., n.e.c.	17	13	22	29	42	33	20	21	34
Mathematical sciences	170	203	226	201	228	280	223	247	206
Computer sciences	82	63	74	74	100	91	78	71	157
Agricultural sciences	307	375	373	409	441	454	512	529	574
Biological sciences	8,355	8,707	9,164	9,722	10,346	10,752	11,518	11,799	12,648
Anatomy	284	282	310	342	330	382	468	471	521
Biochemistry	1,748	1,783	1,858	1,985	2,113	2,078	2,216	2,160	2,123
Biology	1,010	1,125	1,128	1,088	1,176	1,225	1,283	1,336	1,398
Biometry/epidemiology	54	67	59	93	74	70	100	97	95
Biophysics	183	121	101	133	116	124	138	118	156
Botany	357	330	355	373	408	443	445	433	475
Cell biology	653	648	723	812	899	894	977	1,213	1,282
Ecology	39	36	37	37	39	33	52	57	49
Entomology/parasitology	112	113	139	143	162	176	219	212	236
Genetics	344	382	377	428	493	504	535	596	676
Microbiology	1,025	1,071	1,168	1,255	1,308	1,405	1,539	1,473	1,802
Nutrition	150	150	202	185	177	141	130	134	175
Pathology	584	607	619	709	708	819	899	999	1,092
Pharmacology	801	816	855	880	902	991	1,033	1,079	1,153
Physiology	754	817	833	896	1,019	1,034	1,067	1,043	1,057
Zoology	183	157	212	217	214	209	214	163	163
Biosciences, n.e.c.	74	202	188	146	208	224	203	215	195
Psychology	435	422	495	517	454	493	535	457	503
Social sciences	348	330	349	322	377	319	374	446	425
Agricultural economics	28	18	31	35	31	20	28	57	64
Anthropology	60	57	57	52	54	56	74	64	50
Economics (except agricultural)	20	26	19	22	36	9	33	37	40
Geography	7	14	10	11	16	22	22	19	25
History and philosophy of science	19	12	11	11	19	16	12	18	19
Linguistics	51	30	26	21	42	36	30	38	14
Political science	43	31	44	66	54	49	41	66	84
Sociology	99	114	92	84	93	73	83	104	99
Sociology/anthropology	1	0	2	1	3	1	0	2	1
Social sciences, n.e.c.	20	28	57	19	29	37	51	41	29
Total, health fields	5,062	5,354	5,488	5,848	6,071	6,382	7,097	7,507	8,535
Dentistry	190	173	201	89	64	87	38	27	117
Neurology	301	352	327	365	420	478	463	530	598
Nursing	6	14	17	16	49	30	32	19	28
Pharmaceutical sciences	241	269	318	384	407	484	549	445	482
Preventive medicine/community health	157	186	177	215	182	162	192	216	228
Speech pathology/audiology	18	18	18	12	25	26	28	28	41
Veterinary sciences	50	78	69	100	112	132	111	102	126
Clinical medicine, n.e.c.	4,021	4,186	4,283	4,587	4,735	4,899	5,586	6,017	6,813
Health related, n.e.c.	78	78	78	80	77	84	98	123	102

KEY: n.e.c. = Not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering

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SURVEY MATERIALS

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Crosswalk between NSF discipline codes and the NCES Classification of Instructional Programs 52

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INSTRUCTIONS FOR SURVEY OF GRADUATE STUDENTS AND POSTDOCTORATES IN SCIENCE AND ENGINEERING, FALL 1991

Purpose of the survey

The survey provides a comprehensive picture of the training of future scientists and engineers in the Nation's graduate schools. Data are used by Congress and the executive branch during budget preparation, and by State government agencies and other analysts to assess future supply and demand of science and engineering (S&E) personnel.

The average time required for questionnaire completion is 2 hours. Response burden comments should be directed to Herman Fleming at (202) 357-9520.

Students to include in survey tabulations

Count as graduate students persons enrolled for credit in a S&E master's or Ph.D. degree program in fall 1991. Report M.D., D.O., D.V.M. or D.D.S. candidates, interns and residents only if they are concurrently working for a S&E master's or Ph.D. or are enrolled in a joint medical/Ph.D. program. Individuals who already hold graduate or medical degrees and are working on another master's or Ph.D. degree are considered graduate students (Items 5-7), not postdoctorates (Item 8).

Include S&E students performing thesis or dissertation research away from the campus (for example, at Government- and contractor-owned facilities) in the United States as long as they are enrolled for credit in an advanced-degree program. Exclude students enrolled in a foreign country (at a branch or extension center), as well as non-matriculated students.

All data should be reported in terms of headcounts, not full-time equivalents (FTEs).

Students enrolled in multiple departments/institutions

A student should be reported in only one department. Students enrolled in interdisciplinary/interinstitutional programs should be counted only once, by their "home" department and institution.

Incomplete data

Please write "unavailable" or "unknown" in data cells as applicable. "N/A" means "not applicable" on this form. Data cells left blank are presumed to be zeroes.

ITEM 5: FULL-TIME STUDENTS

Use lines (1)-(6) to report all **full-time** students according to the source of the largest amount of their support. These students are engaged full time in their training activities in their S&E fields; these activities may embrace any appropriate combination of study, teaching and research, depending on your institution's own policy.

Mechanisms of support lines (1)-(5)

The selection process distinguishes fellowships from traineeships. A **fellowship** (1) is awarded directly to, or on behalf of, a student selected in a competition, usually national in scope, to enable pursuit of post-baccalaureate training. A **traineeship** (2) is an educational award to a student selected by his university. An **assistantship** should be classified as **research** (3) or **teaching** (4), depending on assigned duties, e.g., a student devoting most of his/her time to teaching should be reported on line (4). All other full-time students, including members of the armed forces whose tuition is paid by the Department of Defense, should be reported on line (5).

Federal sources of support columns (A)-(F)

Note that students supported by Federal loans should be reported in column (J): self-supported.

Department of Defense (DOD) (A): Sources include the Departments of the Army, Navy, or Air Force, as well as programs within the Office of the Secretary of Defense. Students receiving their main support from the Veterans Administration under the G.I. Bill should be reported under column (F), "Other Federal sources".

Department of Health and Human Services (HHS) (B) and (C): Report students receiving support from the institutes or divisions of the National Institutes of Health (NIH) under (B); support from all other components of HHS should be reflected in (C). Refer to the organizational roster under "Definitions".

U.S. Department of Agriculture (USDA) (E): Include research assistants working on projects financed out of Hatch, McIntyre-Stennis, or Smith-Lever formula funds, competitive research grants, and institution fellowship/training grants.

Other Federal Sources (F): Report students receiving support from Federal agencies other than (A) through (E) such as the Fulbright program, the G.I. Bill, Department of Education, and Department of Energy programs.

Non-Federal Sources of Support columns (G)-(I)

Institutional support (G): Report students supported from your institution, including those receiving tuition waivers. State and local goverment support is also reflected in this column. Students supported from funds originating with the Federal government, such as training grants, should be reported under the appropriate Federal agency.

Foreign sources (H): Include students supported from any non-U.S. source, such as foreign governments, industrial firms, or specialized agencies of the United Nations.

Other U.S. sources (I): Include students supported from nonprofit institutions, private industry, and all other non-Federal U.S. sources not included in columns (G) or (J).

Self-supported students (J): Report both foreign and U.S. citizen students whose main source of support is derived from loans from any source (including the Federal government) and from personal or family financial contributions. Note that these students should be included in the total, column (K).

Women, line (7)

Report all female students by their source of main support. Please note that in each column, data on line (7) should not exceed the total on line (6).

First-year students, lines (8) and (9)

A first-year student is one who will have completed less than a full year of graduate study as of the beginning of the fall term in 1991 in the program in which he/she is enrolled for a degree. All other students should be considered beyond their first year.

ITEM 6: PART-TIME STUDENTS

Report all part-time students here, regardless of their support source. These students are enrolled in advanced-degree programs and are not pursuing graduate work full-time, as defined by your institution.

ITEM 7: CITIZENSHIP AND RACIAL/ETHNIC BACKGROUND OF U.S.CITIZENS

Persons with U.S. citizenship should be reported in columns (A) through (F). Use the racial/ethnic designations from the Bureau of the Census listed under "Definitions". As applied in this survey, these designations do not denote scientific definitions of anthropological origins; thus, a student may be included in the group to which he/she appears to belong, identifies with, or is regarded in the community as belonging. Count each person in only one racial/ethnic group.

Non-U.S. citizens, whether permanent residents or holding temporary visas, should be reported in column (G): foreign. Applicants for U.S. citizenship should be reported as foreign. Native residents of a U.S. possession are U.S. citizens.

Total full- and part-time enrollments reported in this item should match those reported in items 5 and 6, respectively.

ITEM 8: POSTDOCTORATES AND NONFACULTY RESEARCH STAFF WITH DOCTORATES

Postdoctorates (A-F): Include individuals with S&E Ph.D.'s, M.D.'s, D.D.S.'s or D.V.M.'s (including foreign degrees that are equivalent to U.S. doctorates) who devote their primary effort to research activities or study in the department under temporary appointments carrying no academic rank. They may contribute to the academic program through seminars, lectures, or working with graduate students. Their postdoctoral activities provide additional training for them. Include persons affiliated with this department as well as those employed in associated academic research units. Exclude clinical fellows and those with appointments in residency training programs in medical and health professions, **unless research training under the supervision of a senior mentor is the primary purpose** of the appointment.

Use columns (A) - (D) to report postdoctorates by source of support, with the total number reported in column (E). Of this total, report the number who are foreign in column (F).

Other non-faculty research staff with doctorates (G): Column (G) should include all doctoral scientists and engineers who are involved principally in research activities but are considered neither postdoctoral appointees nor members of the regular faculty.

On line (2), report the number of women in each category. On line (3), report those postdoctorates and nonfaculty research staff who hold first professional medical degrees (M.D., D.D.S., D.O., D.V.M.). Please note that in each column, data on lines (2) and (3) should not exceed the total on line (1).

DEFINITIONS:

(1) National Institutes of Health Organizational Roster
Item 5, column (B)

National Center for Research Resources
Fogarty International Center
National Cancer Institute
National Center for Nursing Research
National Eye Institute
National Heart, Lung and Blood Institute
National Institute on Aging
National Institute on Allergy and Infectious Disease
National Institute of Arthritis and Musculoskeletal and Skin Diseases
National Institute of Diabetes and Digestive and Kidney Diseases
National Institute of Child Health and Human Development
National Institute of Dental Research
National Institute of Environmental Health Sciences
National Institute of General Medical Sciences
National Institute of Neurological and Communicative Disorders and Stroke
National Library of Medicine

(2) Other HHS Administrative Units
Item 5, column (C)

Alcohol, Drug Abuse and Mental Health Administration
National Institute of Mental Health
Center for Disease Control
Food and Drug Administration
Health Resources and Services Administration
Office of Human Development

(3) Racial/Ethnic Categories for U.S. Citizens defined by the Bureau of the Census (Item 7)

Black, non-Hispanic: Persons having origins in any of the Black racial groups (except those of Hispanic origin).

American Indian or Alaskan native: Persons having origins in any of the original peoples of North America.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. These areas include China, Japan, Korea, the Philippine Islands, and Samoa.

Hispanic: Persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White, non-Hispanic: Persons having origins in any of the original peoples of Europe, North Africa or the Middle East, except those of Hispanic origin.

For further information ...

If you have any questions regarding the survey, please contact Pamela Krones of Quantum Research Corporation at (301) 657-3070 [fax (301) 657-3862].

UPON COMPLETING THIS FORM, PLEASE RETURN IT TO YOUR SURVEY COORDINATOR FOR TRANSMITTAL BY JANUARY 31, 1992.

NSF Form 812 Oct. 91

NATIONAL SCIENCE FOUNDATION and NATIONAL INSTITUTES OF HEALTH

Survey of Graduate Students and Postdoctorates in Science and Engineering, Fall 1991

DEPARTMENT OR PROGRAM DATA SHEET

Form Approved
OMB No. 3145-0062
Appr. Exp. 8/31/93

due date: January 31, 1992

ITEMS 1-4. **IDENTIFYING INFORMATION**

1. Institution Name ______________________________
2. Name of S/E department or program: ______________________________

If changed since last year, please indicate previous name and whether this represents a merger, split, or expanded program: ______________________________

3. Person in department (or program) preparing this form:

Name: ______________________________

Title: ______________________________

Phone: (   ) ______________________________

4. Highest graduate degree available in this department or program (CHECK ONE): (1) Doctorate ________ (2) Master's ________ (3) No Graduate Degree Offered ________

Institution and department code
(LEAVE BLANK)

Report all data on a "headcount" basis (*not* fractions, decimals, FTE's, etc.). If your department does not enroll graduate students, please move to Item 8.

ITEM 5. NUMBER OF **FULL-TIME** GRADUATE STUDENTS enrolled for advanced degrees (master's and doctorate) in fall 1991. Report each student **only one time** according to the source and mechanism of the **largest amount of support** received in fall 1991.

Students receiving equal support from multiple sources or through multiple mechanisms should be reported only once. To determine the largest source of support, consider only tuition and other academic expenses.

MECHANISMS OF SUPPORT		STUDENTS RECEIVING FINANCIAL ASSISTANCE									SELF-SUPPORTED STUDENTS (including loans and family sources)	**TOTAL FULL-TIME GRADUATE ENROLLMENT** (Sum of (A) thru (J))
		FEDERAL SOURCES (excluding loans)						NON-FEDERAL SOURCES				
			HHS									
		Department of Defense (A)	National Institutes of Health (B)	Other HHS (C)	National Science Foundation (D)	Department of Agriculture (E)	Other Federal sources (F)	Institutional support (including State and local government) (G)	Foreign sources (H)	Other U.S. sources (I)	(J)	(K)
Graduate Fellowships	(1)											
Graduate Traineeships	(2)											
Graduate Research Assistantships	(3)											
Graduate Teaching Assistantships	(4)											
Other Types of Support	(5)											
FULL-TIME TOTAL[1]	(6)											
Of the students in line (6), how many in each data cell are WOMEN?	(7)											

FIRST-YEAR STUDENTS	(8)	Of the students on line (6), column (K), how many are FIRST-YEAR students? (Should not exceed total on line (6)).	
FIRST-YEAR WOMEN STUDENTS	(9)	Of the first-year students on line (8), how many are WOMEN?	

---

[1] The total from line (6) should be inserted in item (7), line (1), column (H)

ITEM 6. NUMBER OF **PART-TIME GRADUATE STUDENTS** enrolled for advanced degrees (master's and doctorate) in fall 1991.

PART-TIME TOTAL[1]	(1)	
Of the students on line (1), how many are WOMEN?	(2)	

[1] The total from line (1) should be inserted in item (7), line (2), column (H)

ITEM 7. **RACE/ETHNICITY** of FULL-TIME (line (1)) and PART-TIME (line (2)) graduate students in fall 1991.	Of the student totals in items 5 and 6, how many belong to the following RACIAL/ETHNIC categories? Be sure to count each student only once.		U.S. CITIZENS ONLY						FOREIGN: permanent residents and temporary visa holders (G)	**TOTAL** (Sum of (A) thru (G)) (H)
			Black non-Hispanic (A)	Amer. Indian/ Alaskan Native (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other, unknown or declined to state (F)		
	FULL TIME, column (H), should equal item 5, line (6), column (K)	(1)								
	PART TIME, column (H), should equal item 6, line (1)	(2)								

ITEM 8. NUMBER OF **POSTDOCTORATES AND NON-FACULTY RESEARCH STAFF WITH DOCTORATES** in fall 1991.		POSTDOCTORATES							OTHER NON-FACULTY RESEARCH STAFF WITH DOCTORATES (G)
		SOURCE OF SUPPORT				TOTAL for all sources (A) thru (D) (E)	Of the total in (E), how many are FOREIGN? (F)		
		Federal			Non-Federal (D)				
		Fellowships (A)	Traineeships (B)	Research grants (C)					
TOTAL	(1)								
Of the total in each cell of line (1), how many are WOMEN?	(2)								
Of the total in each cell of line (1), how many hold the M.D., D.O., D.D.S., or D.V.M. degree?	(3)								

Approximately how many personhours were required to complete this form? ☐

Explanation of variances from prior year's data or other comments:

List of other Federal sources (agencies) from item 5, column (F), and number of full-time students supported by each:

NOTE: This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

This questionnaire has been printed on recycled paper.

Survey of Graduate Students and Postdoctorates in Science and Engineering

CROSSWALK BETWEEN NSF DISCIPLINE CODES AND THE NCES CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

The following set of discipline codes is used to categorize science and engineering departments in the Survey of Graduate Students and Postdoctorates in Science and Engineering. Representative department names are shown under each of the discipline codes.

ENGINEERING

- 101 AEROSPACE ENGINEERING
  - 14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL ENGINEERING
- 102 AGRICULTURAL ENGINEERING
  - 14.03 AGRICULTURAL ENGINEERING
- 103 BIOMEDICAL ENGINEERING
  - 14.05 BIOENGINEERING AND BIOMEDICAL ENGINEERING
- 104 CHEMICAL ENGINEERING
  - 03.0509 WOOD SCIENCE
  - 14.07 CHEMICAL ENGINEERING
- 105 CIVIL ENGINEERING
  - 04.02 ARCHITECTURE
  - 14.04 ARCHITECTURAL ENGINEERING
  - 14.08 CIVIL ENGINEERING
  - 14.14 ENVIRONMENTAL HEALTH ENGINEERING
- 106 ELECTRICAL ENGINEERING
  - 14.09 COMPUTER ENGINEERING
  - 14.10 ELECTRICAL, ELECTRONICS, AND COMMUNICATIONS ENGINEERING
- 107 ENGINEERING SCIENCE
  - 14.12 ENGINEERING PHYSICS
  - 14.13 ENGINEERING SCIENCE
- 108 INDUSTRIAL ENGINEERING/MANAGEMENT SCIENCE
  - 14.17 INDUSTRIAL ENGINEERING
  - 14.27 SYSTEMS ENGINEERING
  - 30.06 SYSTEMS SCIENCE
- 109 MECHANICAL ENGINEERING
  - 14.11 ENGINEERING MECHANICS
  - 14.19 MECHANICAL ENGINEERING
- 110 METALLURGICAL AND MATERIALS ENGINEERING
  - 14.06 CERAMIC ENGINEERING
  - 14.18 MATERIALS ENGINEERING
  - 14.20 METALLURGICAL ENGINEERING
  - 14.28 TEXTILE ENGINEERING
  - 40.0701 METALLURGY
- 111 MINING ENGINEERING
  - 14.15 GEOLOGICAL ENGINEERING
  - 14.16 GEOPHYSICAL ENGINEERING
  - 14.21 MINING AND MINERAL ENGINEERING
- 112 NUCLEAR ENGINEERING
  - 14.23 NUCLEAR ENGINEERING
- 113 PETROLEUM ENGINEERING
  - 14.25 PETROLEUM ENGINEERING
- 114 ENGINEERING, N.E.C.
  - 14.01 ENGINEERING, GENERAL
  - 14.22 NAVAL ARCHITECTURE AND MARINE ENGINEERING
  - 14.24 OCEAN ENGINEERING
  - 14.99 ENGINEERING, OTHER
  - 30.03 ENGINEERING AND OTHER DISCIPLINES

PHYSICAL SCIENCES

- 201 ASTRONOMY
  - 40.02 ASTRONOMY
  - 40.03 ASTROPHYSICS
  - 40.09 PLANETARY SCIENCE
- 202 CHEMISTRY
  - 40.05 CHEMISTRY
- 203 PHYSICS
  - 40.08 PHYSICS
- 204 PHYSICAL SCIENCES, N.E.C.
  - 40.01 PHYSICAL SCIENCES, GENERAL
  - 40.0799 MISCELLANEOUS PHYSICAL SCIENCES, OTHER
  - 40.99 PHYSICAL SCIENCES, OTHER

ENVIRONMENTAL SCIENCES

- 301 ATMOSPHERIC SCIENCES
  - 40.04 ATMOSPHERIC SCIENCES AND METEOROLOGY
- 302 GEOSCIENCES
  - 14.26 SURVEYING AND MAPPING SCIENCES
  - 40.06 GEOLOGICAL SCIENCES
  - 40.0703 EARTH SCIENCE
- 303 OCEANOGRAPHY
  - 26.0607 MARINE BIOLOGY
  - 40.0702 OCEANOGRAPHY
- 304 ENVIRONMENTAL SCIENCES, N.E.C.

MATHEMATICAL SCIENCES

- 402 MATHEMATICS AND APPLIED MATHEMATICS
  - 06.1302 OPERATIONS RESEARCH (QUANTITATIVE METHODS)
  - 27.01 MATHEMATICS, GENERAL
  - 27.03 APPLIED MATHEMATICS
  - 27.04 PURE MATHEMATICS
  - 27.99 MATHEMATICS, OTHER
  - 30.08 MATHEMATICS AND COMPUTER SCIENCE
- 403 STATISTICS
  - 27.02 ACTUARIAL STATISTICS
  - 27.05 STATISTICS

COMPUTER SCIENCE

- 401 COMPUTER SCIENCE
  - 06.12 MANAGEMENT INFORMATION SYSTEMS
  - 11 COMPUTER AND INFORMATION SCIENCES, GENERAL
  - 30.09 IMAGING SCIENCE

AGRICULTURAL SCIENCES (SEE ALSO 102 AND 601)

- 501 AGRICULTURAL SCIENCES
  - 02.01 AGRICULTURAL SCIENCES, GENERAL
  - 02.02 ANIMAL SCIENCES
  - 02.03 FOOD SCIENCES
  - 02.04 PLANT SCIENCES
  - 02.05 SOIL SCIENCES
  - 02.99 AGRICULTURAL SCIENCES, OTHER
  - 03.01 RENEWABLE NATURAL RESOURCES, GENERAL
  - 03.02 CONSERVATION AND REGULATION
  - 03.05 FISHING AND FISHERIES
  - 03.06 WILDLIFE MANAGEMENT
  - 03.99 RENEWABLE NATURAL RESOURCES, OTHER
  - 31.04 WATER RESOURCES

BIOLOGICAL SCIENCES

- 601 ANATOMY
  - 18.0201 CLINICAL ANATOMY
  - 26.0601 ANATOMY
- 602 BIOCHEMISTRY
  - 18.0202 CLINICAL BIOCHEMISTRY
  - 26.02 BIOCHEMISTRY AND BIOPHYSICS
- 603 BIOLOGY
  - 26.01 BIOLOGY, GENERAL
  - 26.0604 EMBRYOLOGY
- 604 BIOMETRY AND EPIDEMIOLOGY
  - 18.2202 EPIDEMIOLOGY
  - 26.0602 BIOMETRICS AND BIOSTATISTICS
- 605 BIOPHYSICS
- 606 BOTANY
  - 26.03 BOTANY (EXCLUDING 26.0302, BACTERIOLOGY – SEE 611)
- 607 CELL BIOLOGY
  - 26.04 CELL AND MOLECULAR BIOLOGY
  - 26.0606 HISTOLOGY

- 608 ECOLOGY
  - 26.0603 ECOLOGY

- 609 ENTOMOLOGY AND PARASITOLOGY
  - 26.0610 PARASITOLOGY
  - 26.0702 ENTOMOLOGY

- 610 GENETICS
  - 26.0703 GENETICS, HUMAN AND ANIMAL

- 611 MICROBIOLOGY, IMMUNOLOGY, AND VIROLOGY
  - 18.0203 CLINICAL MICROBIOLOGY
  - 18.1002 ALLERGIES AND IMMUNOLOGY
  - 26.0302 BACTERIOLOGY
  - 26.05 MICROBIOLOGY

- 612 NUTRITION
  - 19.05 FOOD SCIENCES AND HUMAN NUTRITION
  - 20.0108 FOOD AND NUTRITION
  - 26.0609 NUTRITIONAL SCIENCES

- 613 PATHOLOGY
  - 18.0204 CLINICAL PATHOLOGY
  - 18.1018 PATHOLOGY
  - 26.0704 PATHOLOGY, HUMAN AND ANIMAL

- 614 PHARMACOLOGY
  - 18.0206 CLINICAL TOXICOLOGY
  - 26.0612 TOXICOLOGY
  - 26.0705 PHARMACOLOGY, HUMAN AND ANIMAL
  - 42.14 PSYCHOPHARMACOLOGY

- 615 PHYSIOLOGY
  - 18.0205 PHYSIOLOGY
  - 26.0706 PHYSIOLOGY, HUMAN AND ANIMAL

- 616 ZOOLOGY
  - 26.0701 ZOOLOGY
  - 26.0799 ZOOLOGY, HUMAN AND ANIMAL

- 617 BIOSCIENCES, N.E.C.
  - 26.0699 MISCELLANEOUS SPECIALIZED AREAS, LIFE SCIENCES, OTHER
  - 26.99 LIFE SCIENCES, OTHER

PSYCHOLOGY

- 801 PSYCHOLOGY, COMBINED
- 802 PSYCHOLOGY, EXCEPT CLINICAL
  - 13.08 SCHOOL PSYCHOLOGY
  - 17.0801 ART THERAPY
- 803 CLINICAL PSYCHOLOGY

SOCIAL SCIENCES

- 901 AGRICULTURAL ECONOMICS
  - 01.0102 AGRICULTURAL BUSINESS AND MANAGEMENT
  - 01.0103 AGRICULTURAL ECONOMICS

- 902 ANTHROPOLOGY (CULTURAL AND SOCIAL)
  - 45.02 ANTHROPOLOGY
  - 45.03 ARCHAEOLOGY

- 903 ECONOMICS
  - 06.05 BUSINESS ECONOMICS
  - 45.06 ECONOMICS

- 904 GEOGRAPHY
  - 45.07 GEOGRAPHY

- 905 HISTORY AND PHILOSOPHY OF SCIENCE

- 906 LINGUISTICS
  - 23.06 LINGUISTICS
  - 42.12 PSYCHOLINGUISTICS

- 907 POLITICAL SCIENCE
  - 44.01 PUBLIC AFFAIRS, GENERAL
  - 44.03 INTERNATIONAL PUBLIC SERVICE
  - 44.04 PUBLIC ADMINISTRATION
  - 44.05 PUBLIC POLICY STUDIES
  - 44.99 PUBLIC AFFAIRS, OTHER
  - 45.09 INTERNATIONAL RELATIONS
  - 45.10 POLITICAL SCIENCE AND GOVERNMENT

- 908 SOCIOLOGY
  - 45.05 DEMOGRAPHY
  - 45.11 SOCIOLOGY

- 909 SOCIOLOGY/ANTHROPOLOGY

- 910 SOCIAL SCIENCES, N.E.C.
  - 04.03 CITY, COMMUNITY AND REGIONAL PLANNING
  - 05 AREA AND ETHNIC STUDIES
  - 43.01 CRIMINAL JUSTICE
  - 44.02 COMMUNITY SERVICES
  - 45.01 SOCIAL SCIENCES, GENERAL
  - 45.12 URBAN STUDIES
  - 45.99 SOCIAL SCIENCES, OTHER

HEALTH FIELDS (SEE ALSO 103)

- 701 ANESTHESIOLOGY
  - 18.1003 ANESTHESIOLOGY

- 702 CARDIOLOGY

- 703 ONCOLOGY/CANCER RESEARCH

- 704 ENDOCRINOLOGY
  - 26.0605 ENDOCRINOLOGY

- 705 GASTROENTEROLOGY

- 706 HEMATOLOGY
  - 18.08 HEMATOLOGY

- 707 NEUROLOGY
  - 18.1024 NEUROLOGY
  - 26.0608 NEUROSCIENCES

- 708 OBSTETRICS AND GYNECOLOGY
  - 18.1013 OBSTETRICS AND GYNECOLOGY

- 709 OPTHAMOLOGY
  - 18.1014 OPTHAMOLOGY
  - 18.12 OPTOMETRY

- 710 OTORHINOLARYNGOLOGY
  - 18.1017 OTORHINOLARYNGOLOGY/OTOLARYNGOLOGY

- 711 PEDIATRICS
  - 18.1019 PEDIATRICS
  - 20.0102 CHILD DEVELOPMENT, CARE, AND GUIDANCE

- 712 PREVENTIVE MEDICINE AND COMMUNITY HEALTH
  - 18.1007 FAMILY PRACTICE
  - 18.1022 PREVENTIVE MEDICINE
  - 18.22 PUBLIC HEALTH

- 713 PSYCHIATRY
  - 18.1023 PSYCHIATRY
  - 18.1106 PSYCHIATRY/MENTAL HEALTH

- 714 PULMONARY DISEASE

- 715 RADIOLOGY
  - 18.1012 NUCLEAR MEDICINE
  - 18.1025 RADIOLOGY
  - 26.0611 RADIOBIOLOGY

- 716 SURGERY
  - 18.1044 COLON AND RECTAL SURGERY
  - 18.1011 NEUROLOGICAL SURGERY
  - 18.1016 ORTHOPEDIC
  - 18.1021 PLASTIC SURGERY
  - 18.1026 SURGERY
  - 18.1027 THORACIC SURGERY

- 717 CLINICAL MEDICINE, N.E.C.
  - 18.0299 BASIC CLINICAL HEALTH SCIENCES, OTHER
  - 18.1001 MEDICINE, GENERAL
  - 18.1005 DERMATOLOGY
  - 18.1008 GERIATRICS
  - 18.1010 INTERNAL MEDICINE
  - 18.1020 PHYSICAL MEDICINE AND REHABILITATION
  - 18.1028 UROLOGY
  - 18.1099 MEDICINE, OTHER
  - 18.13 OSTEOPATHIC MEDICINE
  - 18.15 PODIATRY
  - 30.01 BIOLOGICAL AND PHYSICAL SCIENCES

- 718 DENTAL SCIENCES
  - 18.04 DENTISTRY
  - 18.1015 ORTHODONTIC SURGERY

- 719 NURSING
  - 18.11 NURSING (EXCLUDING 18.1106, PSYCHIATRY/MENTAL HEALTH – SEE 713)

- 720 PHARMACEUTICAL SCIENCES
  - 18.14 PHARMACY

- 721 VETERINARY SCIENCES
  - 18.24 VETERINARY MEDICINE

- 722 HEALTH RELATED, N.E.C.
  - 17.0807 OCCUPATIONAL THERAPY
  - 17.0813 PHYSICAL THERAPY
  - 17.0899 REHABILITATION SERVICES, OTHER
  - 17.99 ALLIED HEALTH
  - 18.07 HEALTH SCIENCES ADMINISTRATION
  - 18.09 MEDICAL LABORATORY
  - 18.99 HEALTH SCIENCES, OTHER

- 723 SPEECH PATHOLOGY AND AUDIOLOGY
  - 18.01 AUDIOLOGY AND SPEECH PATHOLOGY

SPECIALIZED PAMPHLETS AVAILABLE

In response to the particular interests expressed by many users of data from the Survey of Graduate Students and Postdoctorates in Science and Engineering, a number of pamphlets have been prepared that concentrate on various aspects of the survey results. If you would like to receive additional pamphlets, please check the appropriate boxes below and return this page with your name and address to the NSF Project Monitor:

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Name: ______________________________

Organization: ______________________________

Street Address: ______________________________

City, State, Zip: ______________________________

[ ] 1. Trends in graduate S&E enrollment, 1975-91
[ ] 2. Enrollment status (full-time/part-time)
[ ] 3. Source of major support
[ ] 4. Mechanism of support
[ ] 5. Sex
[ ] 6. Level of enrollment
[ ] 7. Citizenship
[ ] 8. Racial/ethnic background
[ ] 9. Institutional highest degree granted
[ ] 10. Type of institutional control
[ ] 11. Geographic distribution
[ ] 12. Individual institution listings
[ ] 13. Postdoctoral appointees and other nonfaculty research personnel (Doctorate-granting institutions only)
[ ] 14. Historically Black Colleges and Universities
[ ] 15. Land-grant institutions
[ ] 16. Engineering fields

END

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